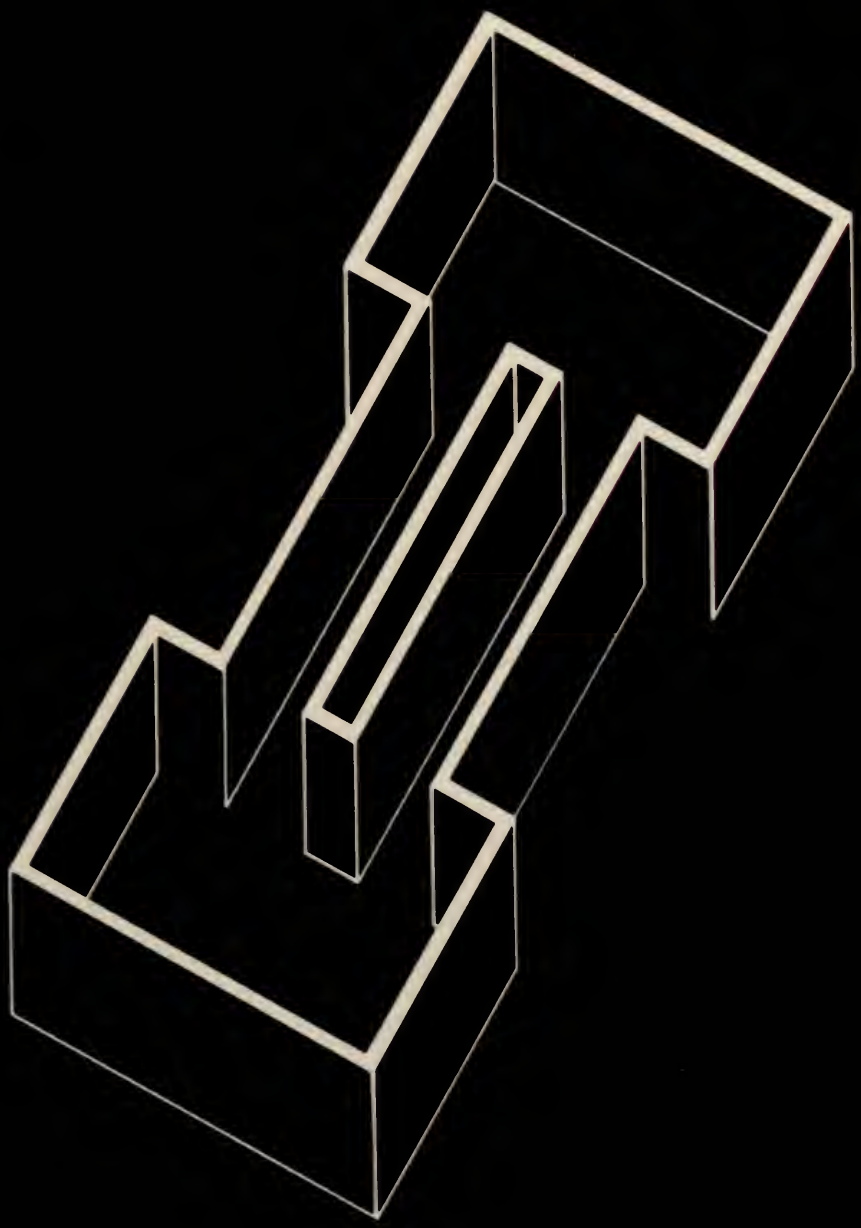
Volume II

What's Next for Facility Management?



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What's Next for Facility Management?

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Facility Management Institute
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Note:

This volume contains responses to the talks printed in Volume I and published before the symposium. In addition, the keynote address of James O'Toole, "The Integrative Nature of Facility Management," appears here. Perhaps the most enduring product of the symposium, the ideas retained and refined by the participants, also appear here, in the form of discussion following each talk. We edited this discussion for publication.

Did the group answer the question posed in the first place? What *is* going to come next for facility management? Predictably, no one had an easy answer. Pressure to make facility management merely the supervision of services (maintenance and others) contracted outside one's organization will increase. The struggle to determine how best to educate and train facility managers will draw more attention. The need to work harder at linking facility management to the strategic goals of organizations will remain. Confusion between the signs of recognition and the substance of true development will grow. There will be a perpetual question about what facility managers should do and how they should do it.

In the end, whether you consider it a set of skills or a philosophy of the work environment, facility management will continue to grow, change, and contribute to the performance of organizations. Without a doubt, facility management can, in Dave Armstrong's words, "fill an important slot in the lives of people and organizations."

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Jeffrey Scherer earned his Bachelor of Architecture degree from the University of Arkansas and has done graduate work at the Architectural Association in London. At present, Scherer is a partner in Meyer, Scherer & Rockcastle, Ltd., an architectural firm in Minneapolis. He was a project architect with the Farrell/Grimshaw partnership for the Herman Miller Manufacturing Facility in Bath, a building that won a First Award for Best Industrial Architecture. His professional experience includes design and industrial projects in Europe and Great Britain.

David Armstrong

David Armstrong holds a Ph.D. in agricultural economics from Ohio State University. From 1968 to 1978, Armstrong was assistant dean of the College of Agriculture and Natural Resources at Michigan State University. In 1978, he collaborated with Robert Propst to develop

the idea for Facility Management Institute, to create its philosophy, and to engineer the logistics of such an organization. Armstrong became the first director of FMI in 1979 and served in that position until 1983. With Cecil Williams and Clark Malcolm, he is author of The Negotiable Environment, *published by FMI in 1985. Currently he is Vice President of Marketing for Herman Miller, Inc.*

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James O'Toole

The Integrative Nature of Facility Management

"The Challenge: Bring order to the whole through design, composition, tension, balance . . . and harmony." With that stirring mandate, the painter Georges Seurat began work on his masterpiece "Sunday Afternoon on the Island of La Grande Jatte." At least, those are the words composer and lyricist Stephen Sondheim puts in the mouth of the character Georges Seurat in the modern musical "Sunday in the Park with George." What the real Georges actually said is lost to us; nonetheless, Sondheim/Seurat's words strike us as true. After all, isn't all art the process of creating order through design, composition, tension, balance and harmony?

Certainly that is true for painting, architecture, sculpture, music, poetry, fiction, dance, drama, and Sondheim's own chosen metier, the musical theatre. True, also, I suggest for the liberal arts: philosophy, history, literature, the social sciences and even the sciences themselves. If you doubt it, consider Einstein bringing order to man's understanding of the physical universe when he created the equation "Energy equals mass times the speed of light squared." There it is: design, composition, tension, balance and harmony.

I shall go so far as to propose the following: All worthwhile and purposeful human activity involves the processes of design, composition, tension, balance and harmony. While I would exclude most play and recreational activity from this sweeping generalization, I would include the processes of family and community life, education, religion, politics and —as you no doubt have guessed where I am leading—the management of business enterprises.

Indeed, after having spent much of the last five years study-

ing the management of some twenty eminent corporations, what stays with me in the final analysis is that each of these great companies is an integrated whole, much like a great work of art. The strategy, structure, policies, programs, objectives, values and behavior of a great company—of any great company—is all of a piece. This means, of course, that each company will be different and unique, with an order—call it a culture, if you will—all of its own. This also means that one cannot generalize about the nature of managerial excellence. Since each organization has an order, culture or personality of its own, there can be no universal laws or rules of management. IBM and Apple are both great computer companies, but their strategies, structures, policies, programs, objectives, values, and behavior are quite different—nearly antithetical, in some ways. Yet, the two companies are alike in the way all great paintings are alike. That is, both companies are well-integrated wholes. Both manifest design, composition, tension, balance and harmony in all they do and stand for, much in the way a sixteenth-century painting by Michelangelo and a twentieth-century painting by Picasso—so different in form and substance—can be said to be similar: Each is so well-composed, so well-integrated.

That great companies are integrated wholes runs against almost everything taught to managers over the last three or four decades. The language of business scholars is the language of specialization and compartmentalization, the language of trade-offs, of either/or, and the language of reductionism. Even a contemporary management guru, often called the most progressive of the lot, counsels his flock to think narrowly. He says, "Be Johnny-One-Notes . . . stick to your knitting . . . and do only one thing, but do it well."

In fact, great companies must do many things. Not only

must they do them all well, they must do them coherently and consistently. I discovered this visiting the headquarters and facilities of the great corporations I mentioned earlier, including Deere and Company, Arco, Motorola, Levi Strauss, Weyerhauser, and Herman Miller. Let me pick John Deere from that list as an example of the "artistic" corporate integration that I wish to describe.

In the 1960s, Deere was a sleepy and satisfied number two to International Harvester, selling only tractors and selling them all domestically. But around that time, the CEO of Deere decided that the company was really made of better stuff. In fact, Deere would show the world that they could become number one. To do so, they developed a three-pronged strategy to lead them into construction products (head to head with the big yellow monsters of Caterpillar), into international competition with the Europeans, Canadians, and Japanese, and into focusing on the top twenty percent of farmers (those who produced the lion's share of the world's grain and could thus afford to buy the very best tractors). To implement this strategy, the company developed an integrated management system that included the strongest dealer organization in the world, partnership with their union, low-cost manufacturing, excellence in engineering and development, an orientation toward the long-range future, a commitment to quality, strong financial controls, and high moral and ethical principles. In most companies, that litany would represent no more than a laundry list of unrelated managerial objectives. But at Deere, through design, the top managers were able to transform all these parts into a coherent whole.

Part and parcel of this grand design—not separate from it, not subservient to it, not superordinate over it—was a plan for the *management of the company's facilities.* It was the

most thorough and integrated such plan of which I am aware. To realize their strategic plans, they invested some $4 billion on new and on renovated facilities. I shall tell you a little something about three of these Deere facilities. First, and most dramatic, is their tractor "factory of the future," situated in the middle of a corn field near Waterloo, Iowa, and symbolizing the company's tie to the soil. To imagine this facility accurately, you must put aside all you have ever seen in traditional factories. This one is different. Not just that it is clean and quiet and well lighted. Not just that it is architecturally pleasing sitting out there, across the field from several classic red barns with silos and all. Not just that the place is twenty-four times the size of a football field (and several stories high, to boot). Not just that there are few people to be seen on the factory floor. No, what strikes you are the lines. The factory looks like one of those Piet Mondrian paintings—all color and geometry. Geometry, especially. The interior of the factory is dominated by vertical lines running from the floor to the ceiling, and horizontal lines connecting them all in an eye-catching grid: thin pipes, beams, pillars, girders, rails—like one of those German factories designed by Walter Gropius in the early part of the century, one in which the skeleton of the building in stark, naked lines was exposed on the outside. But this is the *inside* of the factory I am describing, not the exterior. The outside is clean and smooth and white and blends in with its environment.

The center of the tractor works is dominated by the geometric pattern of a sixty-eight-foot-high stack of some 10,000 storage bins, wire cages that look like enormous shopping carts. All the parts used in assembling a tractor are stored in those bins. Like a giant Rubik's cube, this structure is puzzling. How do they get parts out of a bin that's up there on

the top and over there in the middle? And where is the crib manager and the queue of workers waiting for their parts?

The answer, one discovers, is that a computer finds a part, directs an automated hoist to retrieve the correct bin, and delivers it to a computer-controlled cart that transports it to the worker who had requested the part by simply punching in a number on a terminal at his workstation. Gone, then, at the Deere tractor works are people dragging parts around. Gone are people going up and down elevators to get parts out of the storage crib. Gone are workers standing around in queues waiting for parts. The system saves the workers time and labor. And it saves the company money. Deere now needs only about fifty percent of the inventory required by its competitors.

In addition, the factory employs all of the wonders of modern manufacturing with which you are familiar: flexible manufacturing for mass-produced but customized tractors, computer-assisted design and engineering, group technology, focused factories, robotics and so forth. The bottom line is that through sound design, Deere's tractor works can break even while operating at as little as forty percent of capacity. The plant is so efficient that not even the Japanese are willing to take on Deere in the manufacture of large tractors. In fact, as a result of the investment in this factory, Deere now enjoys a near monopoly in the free world production of large tractors.

What is important to us is that the design and management of this facility are intricately tied to the realization of the corporation's strategic plan. Through architecture, location, and equipment—through people, process, and place—Deere has produced a work environment that is not only economically efficient, beautiful, and symbolic, but also the vehicle through

which the company integrates all the parts of their grand, strategic design. Thus, through design, composition, balance and harmony, order is brought to the whole.

But Georges Seurat tells us that tension, too, is a part of the artistic process. There is always tension among economic exigencies, architectural considerations, human requirements, and technological limitations. And there is tension at the Deere plant, as well. There is always tension in every human endeavor, and we must not believe that any work system can exist without it. There is always tension among the needs of the various stakeholders of the organization: tension among the needs of shareowners, customers, suppliers, dealers, workers, managers, and host communities. Excellence in management is, in fact, the ability to provide symmetry between these various needs, to find ways, for example, to meet the needs of stockowners while at the same time meeting the needs of workers and host communities. In a great company, it is never a choice between building a beautiful facility or building an efficient one. The trick is to build a beautiful building that is also efficient, indeed, to build a facility whose elements of beauty contribute to its efficiency. In a great company, it is never an issue of building a factory that is efficient as opposed to one that provides decent working conditions. The trick is to design work processes that are, at once, both efficient and humane.

These tricks of balancing tension are not easy to master. In fact, as good an example of excellence in facilities design and management as the Deere tractor works are, in at least two respects the managerial process was flawed. The first problem results from the colossal size and scale of the building. By failing to counterbalance the desire of engineers to maximize economies of scale, Deere produced a factory that

makes workers feel like ants in a giant colony. Totally alien from the plant is the sense of intimacy that motivates workers by making them feel a part of a small team. Moreover, the size of the plant locks Deere into the relatively small, expensive end of the tractor market, the end that is more susceptible to booms and busts caused by geopolitics. Because of the size of the factory, Deere simply can't build small, cheap tractors profitably.

The second problem is that the high level of automation makes it difficult to measure and reward the contributions to productivity made by people. Since machines are responsible for work quality and quantity, what is the contribution of the worker? Deere is now stuck with a problem of retrofit, trying to design some incentives back into the system. As with the problems of scale, this problem was one of failure to provide adequate balance, harmony and symmetry. In this case, the needs of one key stakeholder—the workers—were ignored until it was too late. Engineers designed systems that were efficient, but not effective. Had there been proper balance, the work processes would have been both efficient *and* humane.

Such an end can only be achieved by involving the users of technology in the process of its design. For example, some fifty-seven Digital Equipment Corporation employees recently designed their *own* factory. Management gave them carte blanche to take apart the assembly line, modify machines, alter production methods—whatever—with the goal of making computer components as efficiently as any competitor, domestic or foreign. *That* is true integration of facilities management with strategic planning.

The managers at DEC showed great wisdom, insight and courage to resist the pressure from engineers to design the

workplace *for* the workers. In fact, great managers not only learn to live with such tension, they find in it the impetus for creativity. The poor manager will consider two alternative plans for a new facility—and choose the cheapest one in the name of serving the stockowners, often to the detriment of workers, customers and the community. In contrast, the great manager will set to work with his people to design a third alternative, one that transcends the limitations of the initial two choices, and satisfies the needs of *all* the corporation's constituencies.

Of course, this requires executive minds that work in ways more complex than either/or; it requires minds more flexible than an on and off switch. Integrative facilities management requires such a mind. Only a very few managers are capable of comprehending the true, integrative nature of facilities management. The mental versatility and flexibility found at DEC, (and, as we shall see, a skill ultimately developed at Deere and Levi Strauss) is rarely found among business managers. In fact, it is rarely found among engineers, architects, lawyers, doctors, Indian chiefs—or professors of management. The ability to see things in the full, in the round, to see alternatives that do not yet exist, to see connections between seemingly unrelated parts is, surely, the rarest of human traits. That is why the works of a Georges Seurat are so widely admired, and that is why there are so few examples of the kind of creative facilities management found at DEC. Even people whom one would expect to have synthesizing (as opposed to compartmentalizing) minds often fail to make connections between two parts that, in hindsight, are obviously a whole.

Let me offer an example of compartmentalization where there should be integration. Currently, at the Centre Pom-

pidou in Paris, there is an exhibit entitled "Lieux de Travail" (or, Places of Work). The show is a marvelous collection of photos and models of the architecture and interior designs of some of the world's most striking offices, banks, factories, bakeries, breweries—you name it, and it is there. Many of the characteristics I described in the Deere tractor works find their way into such well-known facilities as the Cummins Engines plant at Shotts, England, the Schlumberger headquarters in the suburbs of Paris, a stunning (and absolutely sterile) bank in Milan designed by Oscar Niemeyer, and an Apple computer factory in Silicon Valley. Indeed, the architecture of the computer's innards has reproduced itself in the architecture of many of these buildings. Exposed beams, ducts, girders—the linear geometry of Gropius and Mies van der Rohe—is taken to its *il*logical conclusion in these places of work. From Bauhaus to our bureau, as it were.

In fact, the style is best represented by the Centre Pompidou itself, where the insides found at the Deere factory are inverted, and the building's intestines are displayed outside to the world. It is very much like the world of ducts and pipes and wires gone mad in Terry Gilliam's phantasmagoric film "Brazil." But that these buildings are charicatures of themselves is not the worst of it. In the places of work illustrated in the Centre Pompidou show, *no workers are depicted.* These are, then, works of art and *not* places of work. These are factories and offices designed by architects for architects. Imagine having to work in the rabbit warren architecture of a computer!

Irony of ironies. Two floors up in the same Centre Pompidou, one finds another exhibit. Totally unrelated to the exhibit I have just described, this show is called "Images de Travail" (Images of Work). The exhibit depicts men and

women laboring down through the ages: spinning, pounding, pulling, slashing, pushing, raking, turning, sawing, sewing, stitching, dragging, drawing, filing, filling, fixing, mending, hewing and forging with all manner of ancient tools and modern machines. The exhibit reminds the viewer that the French word for work, *travail,* comes from the Latin word for torture. And what do we find were the most torturous places of work? The factories of the industrial revolution and the offices of the bureaucratic revolution. The conclusion one draws from this exhibit of images of work is that the human experience of the nature of work is intricately related to the *places* where people work. This, of course, is the central point that is entirely absent from the exhibit of work places only two floors—but light years—away in the same building.

Why can we not see such obvious connections? Or to see the other obvious connections between the nature of work facilities and the nature of the work done in them? Indeed, the human tendency to see related things as separate, to turn complements into either/ors, is found not only among museum curators, architects and managers, but even, alas, among professors of business. For example, one would expect business schools to teach about the integrative nature of facilities management, to show students how the design of McDonald's hamburger stands is tied to that firm's strategic objectives, how Apple's new plant is integral to achieving its business goals, or how the design of some General Motors plants has actually kept workers from achieving the objectives of the firm. But, in fact, facilities management is not taught in business schools.

I lay the blame on the uncritical acceptance of business professors of the so-called "two-factor" theory of the psychologist Frederick Herzberg. In the 1960s, Herzberg posited that

motivation to work comes only from the intangible, intrinsic quality of the task itself. That is, such concrete things as pay, pensions, vacations, day care centers, and physical facilities do nothing for a worker's motivation. A theory that was so baldly either/or gained immediate acceptance among a professoriate predisposed to receive it. Business school profs, always on the lookout for scientific fact, (which Herzberg's theory wasn't; it was speculation), quickly dropped all considerations of such things as pay and physical facilities from the curriculum. Today, courses taught about human behavior in organizations focus on personality, leadership, teamwork, job design, values and the like. Students are summarily informed that money doesn't count, and that the physical environment of work is a mere "hygiene factor." That is, it is to be taken for granted, like having a bath.

It was not Herzberg's intention to downplay hygiene factors to the extent that his disciples have done. He recognized that taking a bath is important—indeed, you especially notice its importance in its absence (as a commuter on the Paris Metro, I can attest to this fact). But, unwittingly, the soft professors of the behavioral sciences thus fell into lock-step with their tough-minded colleagues in finance who, for their own reasons, are also against using the physical environment as a source of motivation.

Unfortunately, life doesn't always imitate the theories of professors. We now know the limitations of the theory of Herzberg. It is not either/or, motivators vs. hygiene factors. It is *both*. And we now know, moreover, that there are many different kinds of people, all with different and ever-changing needs. For example, we now know that money is a prime source of motivation for many people—often even for those who are quite rich and who appear to be self-actualized in

fascinating jobs. Then, there are a few, like those in Tracy Kidder's *The Soul of a New Machine,* who love working sixteen-hour days in a rabbit warren for a pittance.

And we also now know that physical working conditions affect motivation. It is not that good light, clean restrooms, warm offices, cheery surroundings, and nice art on the wall *directly* motivate employees. But the quality of physical facilities symbolically tells workers how they are valued by management; indeed, it tells workers how management values the entire activity in which they are engaged. The physical facilities tell workers the extent to which management cares about what it does. In poorly designed and maintained facilities, workers will say, "If they don't care, why should I care." (Physical facilities have a similar impact on consumers' attitudes.) The significance of this nexus is perfectly articulated by Cecil Williams, David Armstrong, and Clark Malcolm in their marvelous book, *The Negotiable Environment.* They write, "The environment can also communicate symbolically an organization's concern with its employees and the public—or its apathy."

From such symbolic acts of management concern and care come employee pride, identity, and, ultimately, commitment. Thus, it was not accidental when, in 1964, Deere and Company launched its aggressive strategy to become number one that they commissioned Eero Saarinen to design a new corporate headquarters. This is the second of the three Deere buildings I'll describe. These familiar buildings—they graced the cover of *Time,* you may recall—are constructed of glass and unpainted steel, which has been allowed to rust to the color of fall leaves. The insides of the buildings are open, multi-story greenhouses—jungles of figs, yews, and coffee trees smack in the midst of Moline, Illinois and its in-

famous winters. Everything in the building is flexible (the open offices look like illustrations from a Herman Miller brochure), and everything is functional. (For example, an adjoining lake and fountain are used to cool the building on hot summer days.)

The question is, why would a staid, old-line firm build such a daring and expensive palace—and before it built its factory of the future? Because then-CEO William Hewitt was determined to inculcate in every Deere employee an understanding of "how good we really are." The new building was, in effect, the symbol of the new John Deere Company that was to come. Hewitt felt that the quality of Deere tractors should be made manifest in the quality of all aspects of the corporation's material and spiritual culture. Hewitt explains: "Our buildings have added a new dimension to our business, an additional pride in what we are about. In many fundamental ways, they have raised the sights of all the people both in and outside our community." The next step, of course, was the implementation of their grand strategy. *The Challenge: Bring order to the whole through design, composition, tension, balance and harmony.*

That corporate facilities can provide an integrative managerial function is similarly attested to by the experience of Levi Strauss and Company. Some dozen years ago, the company moved from their original, ancient brick structure in the slums of San Francisco to a new, high-rise building in a ritzy development near the Embarcadero. But something happened in the new building. The people at Levi Strauss lost their traditional, close-knit culture—their "maternalism" as they call it—and, ultimately, they lost their way financially, as well. In the new building, with employees on many different floors, top management felt that they were losing touch with

their people, meeting them only by chance in elevators.

Realizing this, the company then moved to a new campus at the foot of Telegraph Hill that was constructed to meet the peculiar needs of its corporate culture, as well as to assert symbolically the company's ties to San Francisco and the Old West. Now, in low-rise facilities constructed in the style of neighboring brick buildings of historical note, Levi's CEO Robert Haas says, "We belong on the ground, no higher than tree top level." People at Levi Strauss now see that there must be an integration of their facilities with corporate culture, objectives, and values. They learned this lesson at great expense. The mistake they made was to separate the economic decision to move to the high-rise complex from the managerial decision of how they wanted to operate as a human organization.

All too often, when making important decisions, corporations turn to specialists. And, indeed, any company would be foolish to attempt to build a new headquarters without the professional contributions of an architect. At the same time, the architect must not be allowed to make decisions that have managerial consequences. I am particularly sensitive to this fact because a former dean of USC's business school once trusted I. M. Pei. Mr. Pei won a major architectural award for the building in which I have worked for fourteen years. It is, in fact, a visually pleasing—perhaps even beautiful—edifice . . . from afar. But, inside, where several thousand people daily move about from classrooms to offices over nine stories, there is no beauty. There are only cramped corridors and there are only two elevators (small and uncoordinated elevators, I might add, that go up and down at the same time). In the classrooms, chairs and desks bolted to the floors make the configuration of the rooms totally inflexible. For six months

of the year, the building's beautiful windows are exposed to the harsh southern California sunlight—a powerful force that overpowers the air conditioning. Of course, while the California sun is hot, the California air tends to be mercifully cool. But the windows do not open to capitalize on the natural air conditioning that comes off the Pacific. It is a familiar story. To architects, windows that open ruin the visual effect of their buildings. To vice presidents of finance, windows that open waste money. To engineers, windows that open foul up computer-controlled cooling systems. To employees, students and customers, alas, windows that open are a God-send that allow them to do their business on sweltering days.

The issue is not windows. The issue is how to manage facilities holistically. The price of ignoring the concerns of any of the organization's stakeholders can be terribly high, as my example of Deere's factory and Levi's headquarters illustrate. I mentioned earlier the sterility of a bank in Milan designed by Oscar Niemeyer. One wonders if this bank works as a social system any better than that other colossal economic and social failure of Niemeyer's—the city of Brasilia—which, for all its architectural genius was, and is, unlivable. (Come to think of it, Terry Gilliam might have called his cinematic spoof on modern technology and architecture "Brasilia" instead of "Brazil.")

At any rate, all of this is in preparation for my main point: The role of the facilities manager must be not only that of integrator, but, first, that of *teacher.* Because of the nature of reward systems, the nature of professional peer pressure, and the specialized nature of higher education, architects will view buildings as works of art, engineers will view buildings as factors of production, managers will view buildings as cost centers, and employees will view buildings as places where

they spend a third of their lives. Each of these groups of stakeholders is, of course, right as far as they go. Facilities *should* be works of art. Corporate buildings today serve a social purpose similar to cathedrals in the middle ages, and it is, therefore, the responsibility of corporations to advance the state of architecture in all their facilities. Moreover, all factories and offices *should* be made as economically productive and efficient as possible, just as they *should* be built to allow for effective and flexible human interaction. The role of the facilities manager must be to take each of these separate truths and integrate them into a coherent whole that is inseparable from—and advances—the overall objectives, values, and purpose of the organization. Since this integrated view will be resisted by each of the players, it is thereby incumbent on the facilities manager first of all to be a teacher who gets the various stakeholders to look beyond their various parts to see the greater whole. Moreover, a facilities manager needs to be a teacher even in the absence of a CEO with commanding vision. One must sometimes educate CEOs, as well.

When facilities are at one with managerial intent, with the objectives of the organization, and with its values, then one has beauty, economic efficiency and humane functionality all at one and the same time. Let me offer one last example from John Deere to make the point. In actuality, the most impressive Deere facilities are neither its twenty-four acre tractor factory nor its Saarinen headquarters, but a hodgepodge of sixty-year-old brick factories spread over half a square mile near the center of Waterloo, Iowa. These old buildings have recently been renovated and turned into one of the world's most productive diesel engineering plants. Unlike the Deere tractor works, these old factories have a sense of scale, human community and, even, in their exteriors, a kind of functional

beauty that the giant new plant lacks. These are buildings with windows that open. The factories were designed not to maximize economies of scale, but to involve the highest level contributions of all workers—their brains and not their brawn. They were designed *with* the workers to meet their needs. Significantly, these Deere workers—unlike any other members of the United Auto workers—identify themselves first as Deere employees and not as union members. The net result of these engine works is that employee efforts are freely directed to meeting the strategic objectives of the organization.

The difference between the Deere tractor and engine plants is much like the difference between the Centre Pompidou in Paris, with its overpowering scale and exposed guts, and the new, smaller Musée Picasso, a few blocks away, that was created in the shell of a centuries-old building. The best features of that old building—staircases, intimate rooms, exposed stone, windows that open—have been preserved while the best of modern architecture—glass, light, air, open space—has been added. The overriding objective has been to make the building a pleasant and informative experience *for the museum goer.* Indeed, the Musée Picasso works far better as an artistic, economic, and functional facility than the over-architectured, over-designed and, ultimately, dysfunctional museum, the Centre Pompidou: People actually stop and look at the works of art in the Musée Picasso! *"The Challenge: Bring order to the whole through design, composition, tension, balance, and harmony."*

But the last words belong not to an artist, or to a professor, but to a manager. Thornton Bradshaw, former President of Arco (and recently-retired CEO of RCA), sees the role of corporate leadership as managing tension. He believes that

managers must create a consistent set of principles to guide a corporation when dealing with the conflicting values and needs of all its stakeholders. When a young manager once asked Bradshaw about the culture of Arco, Bradshaw showed that the artistic integration sought by George Seurat parallels the organizational integration sought by the manager. Said Bradshaw: "It must all be of a single fabric. From the company's social posture, through the way it treats its employees, to the care it takes in the artistic decor and style of its buildings, *everything* must manifest a commitment to quality, to excellence, to service, and to meeting the needs and aspirations of our owners, workers, customers and the broader society."

Jeffrey Scherer

Placemaking

The advancement of the idea of placemaking rests upon a judicious definition and the perspective or bias of the placemaker. As stated by Cohen and Nagel (*An Introduction to Logic and Scientific Method*), "Definitions aim to lay bare the principal features or structure of a concept, partly in order to make possible a systematic exploration of the subject matter with which it deals."

While inevitably there are as many definitions as definers, often as a matter of course the narrower the focus, the more specific the definition. In the case of placemaking, however, we are working in the realm of spatial disciplines that overlap many areas of concern. For example, Mr. Dugas is concerned about the simultaneous tyranny and liberation of technology in placemaking. These concerns, besides technology, include the economics of building, servicing of buildings, design, and, as Mr. Dugas mentioned, productivity and efficiency.

Placemaking is a concept that bridges the mental and physical aspects of place. Any exploration into this phenomenon will be enhanced by a common understanding of place. To this end, I put forward the following definitions which reflect my bias towards architecture as a bridge between the physical and metaphysical.

Place is always limited. It is created and set up for specific purposes. It is particular. It is comprehensive. It is known.

Place is a point of departure from which we orient ourselves. Place can also be a point of return.

Place needs a pronounced border; a distinction between what it is and what it is not—what is inside and what is outside; a boundary.

Place identity is a sub-identity of self.

According to Edward Relph in *Place and Placelessness,* place experientially fuses the significant centers of our immediate experience with human and natural order. Place means insidedness—the degree to which people belong to and identify themselves with place.

Places must be distinguishable from the world around them. This generally limits them to objects in a void, to voids in a solid, or to special conditions at an edge between voids and solids.

In general, the definition of place is based on gestalt principles of proximity and closure. Proximity creates a clustering of elements, a concentration of masses. Enclosure, on the other hand, determines a space which is separated from its surroundings as a particular place.

The place is a synthesis of arrival and departure and of inside and outside.

Constructive, cognitive, and social meaning meet in a conception of place.

As stated in the introduction of the upcoming Commonplace Conference on the Philosophy of Place, "Places stand for both a rhetorical and geographical entity. And to a great extent, this composite of the mental and the physical remains today, where 'place' is distinguished from 'space' by its sense of a civic and poetic orientation."

In discussing placemaking, are we hunting a shadow or spearing substance? I propose that we leave the question open for now. By contemplating both avenues of thought, we may reach into the heart of the elusive quality of place. It is necessary for us to consider the dialectic between man and nature. It is also precisely the quantity of variables within the workplace that characterizes the potential of placemaking.

Bear in mind that man, through artifact, creates entirely "artificial" places (in our case, *where people work*). We should be as concerned today with the desired results (performance) of a certain combination of artifacts as we are with the physical and sensual properties of the artifacts themselves. In Martin Heidegger's words (*The Question Concerning Technology*), the potential of these artifacts is to help understand "the unlocking, transforming, storing, distributing, switching, . . . where everything is ordered to stand by . . . as standing reserve."

Placemaking for me is directly related to a pursuit of permanence, a desire to instill a sense of continuity and usefulness coupled with trust for the individual employee. The facility manager or placemaker should, therefore, clarify this sense of permanence by understanding and making use of all aspects of human performance, perceptual judgments, meanings associated with place and artifact, and the relationship of meaning to function and task.

The aim of our explorations into placemaking (or good facility management) is to recognize that all of our actions are connected. Each decision belongs to a bigger family of decisions which affect the livelihoods and well being of the employees. Placemakers hold the power to fuse the mental and physical. The choice of site, architect, interior architect and materials will communicate any attitude about organizations or cultures. I contend that performance will be a logical outgrowth of wise managerial and spatial bias. The design and selection criteria for places will mediate between man and his environment. Heidegger has stated that "man lives in the space 'opended-up' by techniques." Therefore, to quote Peter McCleary in his article "Structure and Intuition," "the limitation is not in the material but in the calculations and

the desire of the culture.''

The places we make are both legacies and new beginnings. The ability of the technique to absorb traces of the past is as important as the need for efficiency in the present. As we go through space, we deposit our own scent and take our own clues. These clues are bound in the ethics of the observer and the observed. Architects and interior architects especially leave strong scents.

We should set out not to study in the abstract the performance criteria of ''placemaking,'' but to understand that places are where people review their own growth, satisfaction, sense of well-being, status and performance. We must integrate social and cultural mores with a physical context. This integration or, as Relph says, the ''fusion of human and natural order . . . and the significant centers of our immediate experiences of the world'' is critical to the creation of meaningful places. Again, Relph's words: ''the crux of place experience is insideness—the degree to which people belong to and identify themselves with place. Existential insideness is a situation of unselfconscious immersion in place, it is the experience of place which most people know when they are in their own community or region. Existential insideness is the foundation of the place concept because place is experienced without deliberate and self-conscious reflection yet is full with significance.''

The purpose of our search for places and how to make them is not to legitimate architecture or facility management but to inspire ourselves to transform the inane into places for the realization of human potential. We are at this moment trying to establish linkages between man and his office environment, while the technique—architecture—is becoming harder and harder to accomplish. Craftsmanship is losing way

to slapmanship, substantiality is losing to superficiality. Architecture is being supplanted by mere building. This conundrum is forcing us to redirect our thinking and energy toward the phenomenon of place.

Part of the problem is raised in the article "Power, A Neglected Concept in Office Design?" by Alan Lipman, et. al. "Often the official managerial view of the office posits that the internal arrangement of office space determines and supports particular patterns of social behavior among office personnel and, so, affects the productive performance of their tasks. Layout is viewed as a means of ensuring efficient work. Exponents of this view seldom refer explicitly to, let alone analyze, the social circumstances and relationships that give use to and sustain office layouts."

The layout of the office should be derived not only from the function but also from the essential elements of architecture. People will learn behavioral patterns in relation to walls, windows, doors, thresholds, etc. and consequently will have also learned associations with them. These associations are clues to effective placemaking. Personal space, status, territoriality, and group formation strongly concern and influence users of work space.

For purposes of discussion, I would like to advance the notion that placemaking is a matter of boundaries. Placemaking accounts for the attitudes we express towards the divisions or boundaries that demarcate and establish the sense of place. To this end, there seem to be six ways of understanding these boundaries: personalization; residual space; idiosyncrasy and randomness; hierarchy and order; permanence and change; and privacy and status.

Each of these six aspects can influence the attitude that a facility manager takes toward making places both for the cor-

poration and the individual. All of these aspects must be accounted for in a successful place. A brief discussion review of these aspects follows.

1. *Personalization:* Individuals mark or personalize their environments. Other human beings respond to this personalization. Frank Becker has defined personalization as "the expressive display of the occupant's values, status, identity, preferences, and activities." Personalization links control and pride.

2. *Residual Space:* Spaces which compose place should be linked, though they can be discrete at the same time. The linkage between the spaces must convey a sense of what is important about both the individual's space and the adjoining spaces. Often this residual space, linking space, creates the memorable aspects of a particular place.

3. *Idiosyncrasy and Randomness:* Exceptional buildings and memorable places are known for their particular location and meaning. The specialness of a particular place is often related to its intense, complex, and idiosyncratic nature. I contend that a sense of place is marked by specific and seemingly random (therefore particular) occurrence. These places become the reference points to specialness within an office: a special window, column, unique shape, or differentiated ceiling.

4. *Hierarchy and Order:* Differences exist in all architectural compositions among their forms and spaces. These differences reflect the importance of these forms and spaces and the functional, formal, and symbolic roles they play in an

organization. Hierarchy can be achieved through size, shape, or strategic location.

Order is a device to provide clear understanding of the office structure and intent. Besides any overtly tyrannical meaning, order helps people to understand and learn responses to space quickly. Order can be expressed through repetition, axis, and symmetry (bilateral or radial). These aspects, hierarchy and order, are important ingredients of placemaking. They can delineate and demarcate space for specific purposes.

5. *Permanence and Change:* The physical workplace establishes the stability, limits, and boundaries of a particular place. True placemaking must account for the real and perceived need for permanence. From the physical setting, configuration, and materials, employees can detect the attitude of the corporation toward work and the worker.

6. *Privacy and Status:* Privacy results from an active, voluntary process in which individuals set the boundaries between themselves and the group. The boundaries of place control the three main aspects of privacy: visual, acoustical and physical. Practices within a particular office, however, can cause the definition of privacy to vary from one setting to another. A perceived lack of privacy in closed offices may be a matter of manners. Complaints about a lack of privacy in an open office may be a way of voicing a feared loss of status. The size, location, quantity of amenities and material palette can signal status. The role of privacy and status in placemaking should not be underestimated or devalued through inattention.

The traditional office does, to some extent, respect most of these six aspects. In fact, a greater sense of place more often exists in traditionally configured office spaces than in the open plan offices of late. Yet many traditional offices have become open plan spaces. The transfiguration of the traditional office to the open plan office was based, in my opinion, on two fundamental assumptions. First, that the technique (architecture) could be transferred through systems. In the act of transferring, the qualities were also assumed to be transferred. Second, efficiency was in itself an overriding preoccupation which erased the need to be concerned with the individual. It was assumed that the individual could understand the transfer and make the necessary spatial and physical compensations.

I submit that these assumptions are one of the reasons we are discussing the issue of placemaking. While we cannot imagine the efficient operation of an office without the use of open office planning techniques, we can learn from placemaking and begin to instill a greater sense of place in these spaces.

Placemaking should recognize three levels of facility management: the physical, the social and policy supports.

Physical facility management can establish boundaries which define place, provide for the personalization of place, allow for a demarcation of turf, control access to a place, limit distractions, encourage interaction at the will of the occupant, allow movement to rather than through a place, permit individual intimacy with one's own thoughts and work, provide a method to express status, and create meaningful architecture.

Social facility management can define territory, provide a consensus of meaning for place, enable discreteness, estab-

lish a perception of accessibility, and make adjustments for perceived inequities.

Policy facility management can establish attitudes toward control by the corporation or individual, permit or prohibit personalization, express commitment to the individual, express confidence in the ability of the individual to be trustworthy, and create a sense of place.

In conclusion, placemaking is a prerequisite for social and business success. It can determine movement through space, define space, convey intentions, express the corporate view of itself and the individual, integrate dependence and independence.

We, as placemakers, can establish the realms of possibility within our own spheres of influence. The esteem of the corporation and the individual is in the balance. We should not be a shadow boxers. We should face the reality of physical places as harbingers of efficiency and well being.

Additional references:
Gaston Bachelard, *The Poetics of Space*
O.F. Bollnow, *Mensch und Raum*
Kent Bloomer and Charles Moore, *Body, Memory, and Architecture*
Geoffrey Broadbent, Richard Bunt, and Charles Jencks, *Meaning and Behavior in the Built Environment*
Christian Norberg-Schulz, *Existence, Space, and Architecture*
Jean Piaget, *The Child's Construction of Reality*

The author would like to thank Paula Merrigan for her help with this essay.

Discussion

John Adams:

I think I agree with Jeff Scherer. I can tell you that he might be from Arkansas, but he doesn't live there now. . . . The first presentation has what I would think of as a kind of a technocratic orientation; it assumes that the fundamental problems all of us face as facility managers can be defined in terms of how we're going to accommodate computer systems. I personally don't buy into that assumption. It certainly is a very big part of what we do, but far from all of it.

The second problem that I had with Ed's [Dugas] talk was the supposition that this information is hot, and we all ought to call our stockbrokers. I don't think it's hot. I think it's what we already know. I think this is really conventional wisdom that everybody in this room has been dealing with for five to ten years. I think we deal with it all the time. So what I infer from Jeff's remarks and what I personally agree with is that all I've ever read and everything I know intuitively suggests that if you want to explain why buildings are the way they are and why environments are the way they are and why people use them in the way that they do, you have to look at a whole variety of issues, some of which are technological.

. . . To assume that the whole issue of placemaking is being driven by certain impressive technological advancements, which are certainly real, is a vast oversimplification of the real issue.

Paul Lilly:

John, I agree that those things are all elements, but I think many organizations care less about those elements than

something new, something hot that has been brought to their attention, something that they see the competition doing. . . . I think the thing is how to bring someone in as a facility person between the aesthetic, the culture, the social side (which I agree is important), and the very strong demands on the organization's part for technology. I think that's an issue.

Dominick Prezzano:

I listened to all these things, and I kind of agree with the facility management standpoint. Let me cut quickly right down to the bottom, the way I see it. In any company it depends upon the thinking on top. . . . It gets down to a budget, what the expenses are, and you're responsible for the bottom line.

I can't go in and try to sell someone fancy VDT stations or get one of these flat VDTs that uses less space. They're not interested in that. The manager tells me it took five years to depreciate these VDTs. Now, I own them. Now, I can get some work out of them. I'm not paying for them anymore—not that they don't know that the environment could suffer.

. . . Efficiency means saving dollars and less expense. If you can give it to me and I don't have to spend any more dollars, I'll take it. If not, I'll get along without it.

Nick Johnson:

I want to pick up on what Dom said. I think the problem is that this group is not the group of people directly involved in designing the next workstation. I'm not the guy that's going to design the LAN. . . .

The thing that strikes me is the way this job has grown . . . . I'm involved in various ways in the American Association of Medical Colleges, the FMI, the new International

Whitaker

Facility Management Association, the Urban Land Institute and five others. It's a real differing group of people that come together when the directors of facilities get together.

Ed said it's too bad the computer guys aren't talking to the guys that make the furniture. That's what I think our job is if there is a job for directors of facilities. . . .

What your boss or what my boss wants to know is what the bottom line is; how is the overall facility's program impacting on the business of the company; what's the cost per unit of business; how do you automate the entire process and not just the workstation and not just telecommunications and not just how our security system works and not how our maintenance department's functioning—but how can you allow all these activities to get together.

When I look at what's next for facility management, I'm hoping to see what kind of definition for this kind of job there is and how it all ties together.

Susan McGrath:

Ed started in his presentation with a statement: Problems increase as users become more demanding. I see that we as facility managers are responsible for budget. We have to answer to the top, but we are also responsible for supporting every clerk in the place. And if we can make those clerks more productive—even if we can't measure it—we can make them happier. . . .

David Streeter:

Clearly, I see my role today as an integrator. . . . I've got one vice president who asks will the employees be happy? You say yes, they will. . . . All those factors have to be integrated and end up with a vice president satisfied that his people are happy. It becomes a tough balancing act.

Doug Sherman:

Most of the comments I've heard have related to the office. The fact is there are a lot of facilities out there. There are things we call hospitals and health science research laboratories. There's industrial production of all kinds. It's very interesting if you take a look at different classes—facilities as classes— because they go through the kind of trauma that we are right now going through in the offices but at different points in time.

There was a traumatic time for research laboratories about twenty or thirty years ago. There is some more coming on now I understand. . . . I think we can very nicely look to other groups that have been through some cycles so that we can get some better insights into the issues of importance to us.

Rem Stokes:

I live in the unique world of spending most of my time in factories. . . . Let me describe a factory to you. You start with a product. You start with a process here. You've got to make this widget, and the whole building is designed around building this widget. If you have to mold something, it tells you what kind of power to bring into the building, what type of water you have to bring into the building, what type of compressed air. If you generate heat from the machine, it tells you how to cool it down. If you have to condition that air, it tells you the size of your air conditioner.

Frankly, when it's all done, you have spent something like ninety-five to ninety-eight percent of your time talking about the process, the product. And frankly, you won't like to hear this, but the people element in this thing is a

two to five percent type of consideration.

Okay. How do we judge this to be a good factory? We have a way of measuring it. We talk about cycle time. And if you can get the cycle time down, you become rich fast. If you don't, you don't. . . . We work our fannies off to try and get this cycle time absolutely to a minimum in a factory.

I submit to you who are in the world of offices here that you're probably spending something like ninety-five to ninety-eight percent of your time worrying about these people over here: how they sit; what the colors are; what the noise levels are, and so forth. The purpose of an office is not to make people happy. The purpose is to do the business of a company and the direct analogy between a product here that we build in this factory is information to the office world.

And I submit to you the place to start designing an office is not at the level of people but at the level of the information that has to be processed in that space, right? . . . And two different offices made in two different ways will process information with much different efficiency. Right?

Jeff Scherer:

What if you reverse that? What if you spent more time with the people and processes? I think a lot of it has to do with bias of the designer. And when you sit down and think about process, your bias is in cycle time, and it has to be because that's your definition of success.

I think there can be a non-mutually exclusive overtone, if you will, layered onto decisions about cycle time. For example, at the Bath plant, which I did with another architect in England for Herman Miller, every design was based not

only on cycle time but also on quality of the person's working environment: how close he was to the exterior window; the quality of the light; the cycle of the light versus the cycle of the spinning machines so that there wasn't any interference there.

I think the exclusivity of what is implied by what you said bothers me a little bit. . . . I believe that if people are happy, they're going to be doing better work.

Rem Stokes:

I think the reverse is true. You lock guys into the basement of a building and give them an inspiring job and make them feel important and they'll work in a crappy environment and turn out great results.

Jeff Scherer:

That's an entrepreneurial bias which I think is different from a directorial bias.

David Cotts:

. . . I have a local area network between two work groups. Both groups were getting major amounts of office technology coming in at the same time as the network was being installed. And when we got all the analysis done, it cost half again as much to accommodate one group than it had the other. I like to know why those things happen so I went back and looked. And the group that it cost very little to accommodate were your good old computer people. You walk into their offices, and I'll tell you, I'm oversimplifying it, all those people care about is what is on that screen. They don't care whether their eyes are going bad. They don't care whether it's stuffy. All they want to see is if you can divide that screen in four so I can get four pieces of in-

formation on it.

I think too often we say everybody's the same. If we engineer a space for this person over here, we think it's going to fit over here. . . . You can't do it.

John Adams:

I'd like to integrate a couple of comments. First, I agree with Dave's comment about office work. The last time I improved my cycle time on my own managerial work, I found out I was making the wrong decisions faster. The "product" is very difficult to define compared, say, to the factory.

It would seem to me we're talking about a number of competing priorities. It's not cycle time and whether or not people are happy. It's not whether it's going to be technology alone versus some other alternative. It seems to me the reality is that we have a web of competing priorities. Who is in charge of integrating the competing priorities? I think Dave Armstrong would state strongly that it is the job of the facility manager. . . .

David Armstrong:

There is something that has been left out that I thought would be talked about a bit more. I think Jeff got into it. We haven't talked about ourselves at all as critics walking through spaces. We walk through places every day. It doesn't make a difference if it's model homes, factories, homes—we make judgments about those places right away. We make judgments on something that probably would not be quantified most of the time. . . . We are talking about placemaking. We're talking about places that we think we would like to put ourselves into—not denying the efficiency of work. I think somebody's got to be in charge of that "feeling."

Tina Walden:

I guess what I'm thinking of is the incredible role of the facility manager not only to translate . . . but also to balance. And now we're saying the ability to somehow measure an intangible feeling and translate it into the bottom line. I think it's a delicate thing. I think sometimes it can be done. The other thing I got excited about is when you started mentioning human resources and all the other players. The facility manager is now a player among the others and becoming more involved.

Tom Wolterink:

I would like to reinforce the balancing act . . . . I want to stress that we should not build a particular building that is strictly a cocoon around a particular manufacturing process. . . . Likewise, in office design, it's easy to run it as a popularity contest. It's much more effective to consider designing and building offices considering everybody that works in that office is a volunteer. We're really dealing with a volunteer work force; most people have other options. So, therefore, you try to make the space at least as attractive to a volunteer.

Chris Banks:

I'd like to make a couple of comments, one that relates to what was just said about the effect of the corporate culture on placemaking and one about Silicon Valley and entrepreneurial spirit. I happen to spend the majority of my time in our Cupertino office, right in the heart of Silicon Valley. Many of the high-tech companies have gone through that entrepreneurial phase, and people have worked in really pretty distressing conditions. Now many of these companies are coming of age. These companies have matured, and their people are no longer happy working in those en-

vironments. Now we see the competition between the Rolms and the Apples, in particular, to create environments to draw people from company to company. The salaries are fairly similar. People are making decisions based on what kind of health club they have, the windows, what kind of workstations, and that type of thing. . . . Overall, they're looking for cohesive environments, one that makes a statement both to the world and their employees that they care. I think when we look at successful environments, most of them do convey the philosophy that the corporation cares about the people. I think it's the philosophy of taking that corporate structure and putting it into physical form. I think the facility manager's job is to understand what the corporate structure is and make sure that all the decisions being made about specifics are operating within that very important framework.

Frank Yockey:

It seems to me one of the primary jobs of a facility manager is to proactively manage change from an operational standpoint. For example, at the Ft. Collins site in the office environment, we actually have more terminals than we have people. . . . In the environment which I manage, in three years, probably eighty percent of the terminals and workstations will be different. So it's really a question of trying to proactively understand how we can anticipate technology, concern for the productivity of the people, or social issues. . . . I think that's one of the primary concerns.

For example, Ed mentioned cabling. I think it's certainly a big problem for us and will become a big problem for others in the future. I think technology will solve some of those problems. . . . It's not just cabling, but it's noise, the lighting conditions. . . .

Doug Sherman:

I'm sort of an old professor who has the right to think otherwise. I've noticed that there's almost an inverse relationship between the importance of facilities and the morale in the company so long as the facilities are good enough to do the job. . . .

Some of those places looked like one of our old World War II battlefield headquarters. I mean, it was awful. It was terrible. It had poor lighting, poor desks, everything kind of arranged in a circle, but I'll tell you, everybody was excited to be there. If you were a rising engineer, you wanted to be on that project.

That does two things. I think, first of all, we as facility managers have to recognize that in facilities we are suddenly getting a lot of bitching. It may have nothing to do with the facility, but it may have an awful lot to tell us about what is going on with the company as a whole. I think secondly we can be kind of whipping boys in this process in that we're getting blamed for a lot of things we have no control over.

Chris Banks:

That's an extremely interesting point and one that I have noticed over a number of years. In working with companies where the basic philosophy makes the individual important, we very rarely have anybody complain about being in the standardized environment or being changed.

We tend to see more and more in large jobs a situation where in order to manage the facility, we're trying to come up with more and more structured environments where people can be moved and components changed to meet these constantly changing technological advances. You have to go in and make a place, as Jeff was saying, that has

some memorable quality to it.

Standardization is acceptable when there are other compensations, compensations in terms of the company philosophy but also in terms of the physical environment. . . .

Jane Stolper:

I was going to make a little comparison to academia, where I think that I get a good many student complaints. I have found that as long as you make people—the person, the student—feel important in their job and in what they're doing, they can get an awful lot of satisfaction out of that.

We can't generalize about human beings, and I think we tend to do that when we start standardizing everything. . . . And as facility managers, the bottom line to me is that you can make a person feel good and make them as an end result more productive. Then I think you should get your bottom line. It's as simple as that.

Clark Malcolm:

I'm going to try to make a generalization because I think that one of the reasons people are happy in these terrible places that several people mentioned as being enormously productive is that they can do what they like. I want to ask this group how much responsibility for placemaking are you as facility managers and designers and architects willing to cede to the people who work in these places? The other side of that coin is how much responsibility are those people willing to take for making their own places? If we can answer that, maybe we'll explain why these terrible places are so productive and why we can't make more of them.

Ken Von Rohr

John Adams:

Let me just add that I believe in generalizations, too. I can't go for more than a couple of hours without making one, but I wonder whether these people are productive because they do what they like or because they like what they do? I do believe there is a difference. . . .

The fact that people like what they are doing when they are committed to it and involved in it puts them in a totally different perspective in terms of how they view their surroundings. It makes them much more tolerant and, in a certain sense, oblivious to all of it because they are focused on what they are doing.

Rem Stokes:

I think we've done a good job accommodating people. We wouldn't dare build a building without putting good lights in it, without air conditioning the thing. We do a lot for the people, right? But when you talk about what's next for facility management, we have reached a very nice high-water mark of accommodating people. We will always change the dusty rose and have next year's colors. . . .

David Streeter:

I think it ties in to what is above us. I used to think all the problems I had would be solved by a voice in the hall of the gods. We finally realized we are a dependent function. . . .

The key is getting in and understanding what business needs, what they believe they need to do their job. Maybe we can influence them and adjust them. Sometimes I think on a really good day if I'm not inhibiting the business from getting the job done and being successful, I think I'm doing okay. If I get to the point that I enhance the ability to get the job done, I'm doing even better. . . .

David Streeter

Les Cranmer:

It seems to me that over the last ten years that the facility management profession has developed some credibility and power base so that it is one of these departments that now gets a fair hearing at least. But in order to wrestle with some of the issues we're talking about, I think the model needs to be extended in terms of people, process and place. Placemaking is now a business issue, no longer a facility issue.

Tom Pratt:

There are some of us in the room whose corporations hold us a bit accountable for different kinds of things. My particular CEO does believe that adage that we shape our buildings and our buildings in turn shape us. One of the things he holds us accountable for is to see to it that our buildings express and give shape to our corporate vision as well as our business. He's also the kind of guy who would put me on the stage at a stockholder's meeting and have me get up and tell them the difference between good architecture and exceptional architecture.

Some do believe that a building and a piece of architecture does indeed raise expectations, does give shape to the vision and does give shape to the business. It's not a subservient role but a leadership role, as well as serving the occupants of the building.

Chris Banks:

Ed said that he saw for the future corporations major buildings being multi-tenant rather than having big corporate headquarters. What we seem to be seeing more and more now is almost—with a few exceptions—almost the opposite, of people trying very hard to consolidate. What they

are trying very hard to do is to go through that tremendously complex process of taking what may be hundreds of facilities and consolidating them into campuses or major building sites. We have several jobs that are over a million feet which are trying to do just that, to make a place which gives both image and can begin to improve efficiency.

Michael Wodka:

. . . One of the things that strikes me from experience is that companies that can express their vision, whatever it is, seem to come forward with workplaces that fit. But what is good in one condition may not be good in the next. Is there some universal character that is or isn't really very local, and is the problem then trying to get that definition?

David Streeter:

Now, we're one of those entrepreneurial companies. Our entrepreneurial spirit is still there and probably going to be with us for many years to come. The president is your chief architect. . . . He reviews every major project and makes sure it's setting the tone, both internally and externally. I've watched the company grow fourteen times in ten years, and he still has the time to review a major project. It is the culture. . . . That may change with a new president.

David Cotts:

I think that's good, and it doesn't really matter whether it's good or not because what the boss says, that's the way it's going to be. . . . The key is balance. It's one more thing I've got to balance, but I really have. I think Jeff mentioned it. I can't think of his exact words, but he was talking about unique spaces. Unique spaces drive me nuts. Yet every architect wants to create a unique space. But if the boss says,

Dave, we want unique spaces—guess what? We're going to have unique spaces. But I don't think that has all that much to do with my job being a good, efficient, facility manager for my organization.

Tom Wolterink:

Chief executives have confessed that two variables that they can really control is brick and mortar and hiring of people. Everything else is mush in between. They stated very clearly that the culture of the organization can be determined and expressed through facilities. . . . We have found many, many times when a particular executive is in trouble or is failing in his or her position, that the number of complaints about the facility just skyrocketed. In fact, I keep a little graph, and invariable that person leaves for one reason or another. And it's not as a result of the facilities.

Michael Wodka:

It seems that the representation of an organization's culture isn't that critical a piece of the job unless someone says so. How many of you feel you know when you see the right thing for your organization?

David Streeter:

As a professional facility manager, you might not see that on the list. But when my company measures me, that's way up on the list. . . . I've got to help people through that. Do I always feel comfortable in that position? No. You got to say when something meets the culture, that's goodness. We're going with it. It really gets sticky when you say, "no, it doesn't meet the culture." People say, "How do you know?" . . .

Gary Silver:

It's important to make the distinction between the culture that is being referenced here and the appropriateness of the strategic plan that may be embraced, of which culture is but one element. How integration takes place must be determined by the responsible in-house professionals who understand the mission and culture and can interpret the management mandate. . . . But understanding what you know, the degree of homogeneity of the work force you have, as well as the culture, as well as the plan which arises out of the business—I'll refer to that as strategic facility planning. I think it's much more the facility manager's responsibility than anything else.

David Armstrong

Present State and Future Direction of Facility Management

Let me begin by adding another question to Ms. Doyle's. She asked whether facility management were an art or a science. I would like to ask whether or not it is a fad.

I'm just as surprised as you are that I would have chosen this question to ask here. But I think it is a necessary question. If we are to be serious about facility management and its future, we've got to look honestly at the present and recent past.

First, let me respond specifically to some points raised by Ms. Doyle. Our planet has been covered with trees for centuries. We have chopped, burned, carved, shaped, and cultured wood. Yet forestry, the systematic management of wood, has not existed for much more than a hundred years. Likewise with facility management, though I claim that facility management has really existed for no more than ten years.

Though the elements of facility management have existed for centuries, a systematic, integrated approach such as that advocated by Facility Management Institute, has only been around since the middle seventies. The elements of facility management will continue to exist. Whether truly integrated and broad-minded facility management will survive is what this symposium is trying to determine.

In short, facility maintenance, a reactive *modus operandi,* has been present for years and will continue to thrive with no effort on our parts. The effort will come in sustaining true, proactive facility *management.* FMI began that effort. Other people have got to continue it.

Ms. Doyle seems fairly satisfied with the present state of facility management. I'm afraid I'm not so happy. When FMI

sent the definition to the Library of Congress that it uses now, all of us in Ann Arbor wanted that to be a goal—a prescription, not a description. And that's just what it has turned out to be. Obviously the complexity of work environments—especially offices, where around sixty percent of all workers work—has grown. But facility management as defined by the Library of Congress still is not practiced. That kind of integration is still missing.

Let me speculate on some reasons for that. Let me present you with my own indices of the progress of facility management (not facility maintenance) in the past ten years or so.

The facility management identity index has reached 85 out of 100.

The facility manager indentity index has reached 95.

The facility management profession index has reached 50.

The facility management corporate impact index has reached 30.

In many ways, the reverse of what should have happened has actually occurred. Identity is high, and impact is low, perhaps because the movement may have been too successful in the late seventies. The symptoms of need at that time were phenomenal. The time was right. A large number of people jumped on the bandwagon. The crowd quickly turned the wagon down the street of professional identity and away from corporate-wide impact.

Facility managers tried to do precisely what Ms. Doyle tries to do with her family: tell them what she does and what her position is. My advice is to concentrate on the effect of facilities on the health of an organization. My own job will fall out of that. My professional identity will be a consequence.

Let me sum up. Facility management is the matching of environment to jobs and to people. (Extend people to mean

organization.) We have not yet accomplished that in most organizations. Some research done by Cecil Williams, Clark Malcolm, and myself shows that as few as ten percent of environments may match with the person working there and the work being performed. This matching is another word for integration. Integration results in a series of tasks. Not the other way around.

I can't for the life of me understand why we in facility management get so defensive. We seem to want everyone to understand that facility management has been around for so long and that we've all been working so hard and doing everything so right. Why can't we sit back and reflect on the jobs that we're doing and the setting that we want to create for our successors?

If facility management is a needed function, and I definitely believe it is, it needs to expand in knowledge, strength, and impact. In other words, it should try to reach the goal prescribed by the definition cited from the Library of Congress.

Now let me give you some positive signs using the late seventies as a reference point. I can guarantee to this audience that pre-1979 facility management was exactly what Michaelene Doyle presented in her paper: very reactive, oriented toward caretaking, and signified by maintenance and janitorial duties. The rare exceptions resulted not from facility management but from a particular personality, usually the CEO, who saw the environment as an extension of the corporate philosophy and wanted more than a caretaker image.

The post-1978/79 period did focus on facility management; the focus was one of identity. Pre-1979, no identity. Post 1979, great identity, establishment of FMI, the International Facility Management Association begun in Ann Arbor (now in

Houston) and its many chapters across the country. Before 1979, the facility management function was subsumed under some other name. After 1979, facility management was labeled and identified. Architectural firms started facility management departments with identified staffs. Pre-1979, no support system in the literature. Post-1979, facility design and management magazines, articles and columns in many other magazines. Pre-1979, no discrete group identified with facility management. At FMI, there is now a current and legitimate list of over 15,000 names of people associated with facility management.

Those are all positive signs about the present. Let me move on to the future. I do remember the sign that Nostradamus, the great sixteenth-century futurist, hung on his wall: "Prediction is very difficult, particularly when it's about the future."

And let me give you the thesis of my talk. Without moving toward integration, facility management will disappear. If people concerned about facility management allow it to become a series of services, facility management will become a hollow concept no different from the maintenance schedules practiced for years in the plant or administrative services departments. And let me add that facility maintenance will be around forever.

One mind can integrate, eliminate the layers, and get to the heart of the problem. It saves the filtering process. It rids us of rule books and manuals. Integration is full of wisdom, spiced with experience, and seems to have inherent truth. It is embodied in a strong and confident person. There are no courses in college on integration. It doesn't happen if you are too young. It doesn't happen just because you're enthusiastic. It doesn't happen just because you make a lot of money or

because you have a particular place on the organizational chart.

The progress toward an integrative attitude about facility management might be pictured as a slowly rising curve. For those of you who are familiar with the growth curves of George Land or my own work in facility management, you'll recognize this diagram. Facility management has made rapid progress. It is now slowing to a slow accumulation of knowledge and experience and commitment to integration.

This awareness will continue to grow until a crisis forces the issue. At some point in the future, facility managers will face a point of departure: Either they will move decisively toward facility management as integration, or they will regress to facility management as a mere bundle of services. This crisis will be signalled by the fact that there will be many office jobs and no takers—something like the situation faced by places like McDonalds where jobs exist with no one willing to fill them. Another sign of this crisis will be when the cost of office work becomes so disproportionate to its benefits that organizations rethink the entire white-collar work environment.

How facility management will proceed from this crisis point, I can't say.

Let me talk some more about the future. Facility management services will continue to grow—services like inventory systems and space management analysis. These services will get better and better and will be viewed as indispensible. This will weaken the presence of facility management in the corporation.

Paying for integration is not easy for organizations. It will never be easy. The inertia of budgets and revenue is an amazingly strong force in affecting what is going to happen to fa-

cility management. All of us would agree that facility management as caretaking is extremely inadequate. Yet some executives are not yet convinced of the value in integrative facility management. They would pay for some services, but they would not pay for advantages described in the definition presented earlier. As the costs of ignoring the strategic integration of facilities with other parts of the organization increase, this reluctance to spend a few dollars to save a great many will lessen.

A mistaken notion will begin to take hold that facility management services can be provided like any other architectural or design service. At Facility Management Institute, we always maintained that facility management should take the receiver approach and not the provider approach. We argued that the problem was at the corporate level, that corporations had to buy into the integration of people, the work process, and the workplace. Organizations and their people are the receivers.

The provider group—designers, architects, and others furnishing necessary services of all kinds to corporations—has more strength and more credibility with corporate decision makers than does the integrating group of receivers represented by facility managers. I'm afraid that facility managers are jumping ship for the providers. And it seems to me that we have taken a giant step backwards in doing so. Everything we read in the new management philosophies of Jim O'Toole, Peter Senge, Peter Drucker, and others says that the integrating approach will survive, not the separating one.

Just briefly, what does this mean—especially to the International Facility Management Association? The allied membership side of IFMA will get stronger and stronger and will eventually control more of the policy making than do the prac-

ticing facility managers themselves.

IFMA will find itself more and more fragmented philosophically because the practices of various industries differ. (Without uniting under the principles of integration, facility management will have little common ground.) Utilities differ from electronics firms; electronics differ from giant office buildings; giant office buildings differ from public institutions, etc.

Should IFMA split according to services and the ways they are provided, facility management will find itself much the loser.

The obsession with discrete facility management services will affect much more than IFMA. Facility management academic programs will also suffer. Graduates will be employed by facility management service organizations and those few corporations with a particularly enlightened approach to facility management. In the vast majority of organizations, facility management will be thought of as another management chore: Anyone with managerial or entrepreneurial savvy can purchase and combine services.

Integrative facility management entails a spokesperson from within the organization. A true representative of the receivers. This role must be played by facility managers.

As expertise in facility management concentrates in a few places, a few consulting firms dedicated to integration will set the direction for the entire profession. The service side will follow the market. A few rebels will set up consulting businesses to guide those corporations that want to grow beyond the circle of the commonplace.

In short let me repeat that I see the prime threat to the advancement of facility management posed by a myopic fascination with services. Even facility managers who have been

identified and put on a pedestal today are falling in line with the service trend.

Facility managers are the first to admit that they can't get the staff approved to do the comprehensive job they would like to do. They can't get the budget to do more than the basics. Facility managers are trying to grasp the integrating role but have never been given permission to do so or credit for doing so.

At Herman Miller, more and more letters to our Customer Service Department come directly from representatives of A & D firms calling themselves project or facility management experts. They have become the agent for the corporation. Less and less direction is coming directly to us from people inside the corporation responsible for integrating the facility with other parts of a business.

What is needed to prevent this trend from continuing is extremely complex and more time-consuming than I would like to admit. IFMA must fund a think tank subgroup—a group with clout and a group that's bigger than itself. In other words, facility managers and interested corporations must fund the future of integrating people, place, and process.

I'm convinced that we're coming closer to a workplace crisis in offices. I am not convinced that the greater part of the population wants to gravitate to the big office towers of America. I'm not convinced that the population as a whole believes that the paradigm of a nine-to-five, white-collar, "knowledge-work" job in a nice big office building is the epitome of heavenly work.

We have a basic problem. As we look at offices now, we know that we're making little progress toward integrating all the facets of the built environment with other concerns in organizations. We are simply housing and maintaining a culture

that we have spent little time understanding and less time managing. I'd be the first to admit that we've gotten better. Unfortunately, the problem is growing faster than our skill.

Whether as facility managers or as something else, facility managers of today will have jobs. What is not clear is whether they will have a profession. What is not clear is whether they will be involved in the decision-making process that matters. Or whether they will have colleagues who want to foster and grow into responsibility. What is not clear is whether you will have a source of good and strengthening materials to read and instructive meetings to attend.

If the problems and pressures facing facility management could be solved by directing our efforts solely at ourselves, we would be in good shape. For I can tell you that facility managers are a unique group of people. They have been self-taught. They have learned to survive in the political environment of the organization. They have gained the ability to cross organizational boundaries within a corporation and still get problems solved. They have handled problems that people have given off to them from every part of the company. And they have survived. These are special people in the corporation.

However, we must look outward. We must measure and improve the impact of facility management on the organization as a whole. That can be accomplished only by looking at facility management as an integrative process, one that involves all sorts of departments and people in the business of looking after the environment.

Let me ask three questions as a way to tell if facility management is moving toward integration and not toward the simple supply of services. Let me challenge facility management to ask itself these questions now, in 1986, and then to

ask them again in five years, in 1991.

First: Has the language of facility management changed? Does facility management speak its own lingo or that of the corporation? Do the measures of performance in facility management reflect the concerns of the facility management or those of the corporation?

Second: Are facility managers reading articles about the receivers or about the providers? Do the articles in *Facilities Design & Management* and *Buildings* discuss what vendors can supply or what people and organizations need?

Third: Do facility managers regularly try things with their facilities that they have picked up from the pages of the latest IFMA newsletter? Or are they submitting new ideas to IFMA?

Finally, back to Ms. Doyle's question about facility management as art or science. The question may have been important in the past. Now we should ask is facility management turning to services to the exclusion of integration? And let me repeat my own question: Is facility management a fad? The answer: In a few years we should know.

In 1991, if facility management is merely a bundle of maintenance services and their scheduling, it will have become just a fad. The words *facility manager* will be just another empty euphemism along with sanitation engineer and downsizing. If, however, facility management fulfills its potential of becoming a comprehensive, integrative agency devoted to the built environment within organizations, then facility management will have been a worthy cause. And it will be in five years a healthy and growing profession filling an important slot in the lives of people and organizations.

Discussion

Philip Stone:

David [Armstrong], I was wondering isn't it similar to the problems between marketing and sales? You've got to have the orders in everyday, the buildings have to run everyday. You've got to have also a good marketing group looking ahead. . . .

David Armstrong:

I think the question is a good one. I really believe if an organization is left to its own direction, it would not have marketing. You'd only have sales and sales support. We force marketing to say there's got to be something beyond the next sale. If you let facility management go, you'll still have buildings and still have maintenance, and you'll still have caretaking. You won't have integration. A corporation left to its own free will will gravitate away from it.

Philip Stone:

Dave, my argument is that more people have to realize (just as they have in marketing) you must have marketing and sales support and sales. You've got to get corporations to understand that you have to have facility management. You've got to get enough people to buy into the difference.

Jim O'Toole says there is a difference and it has to do with necessary and sufficient conditions. Facilities will not solve your problems. . . .

Tom Pratt:

There may be another thing to follow up on Dave's statement about marketing. Marketing can become more im-

portant to a corporation if the individual in marketing has a more balanced vision of what it is the corporation is trying to do.

In marketing, one could simply do product management activities and market management activities, and that's not very farsighted. Or he can begin to think about issues of positioning of ourselves as a corporation or pricing policies over time and begin to think about what strategic moves we ought to make.

. . . And I suspect that one of the ways you influence management through facility management is seeing our role as larger than described so as to become influential in the mix of decision making.

Rem Stokes:

Dave, I very much share your concern. I believe that the industry is going to subside, going to die. I think the reason is absolutely structural. As I ask around the group here if they have adequate tools to be a proactive group and create the future or simply be a reactive group to respond to services, I found out that the big things that revolutionize are all electrical in nature. . . .

They've taken telecommunications, MIS reporting, and the personal computer and given that all to somebody else. We're not in the driver's seat. We're not controlling the revolution in the office place. . . .

David Armstrong:

Just a little response. I think facility management has been viewed as being painful. Anybody that wanted to be in charge of facilities had to admit to liking pain. And so we solved it by dividing up the pain so that you have a little bit of pain, somebody else has a little bit of pain, and we

think that way we get the job done. We don't care if it's integrated. We don't care how it impacts. We look at it as independent tasks.

Susan McGrath:

I don't know about other organizations. However, those other departments concerned with electronics report to the same senior vice-president that I do. Therefore, if you've got that person behind you, you can be successful in getting very, very good cooperation between those groups. We know when PCs are ordered. We know when mainframe orders are projected. We know what the budget is for new mainframes and new terminals.

I guess I see this profession not at a senior vice-president level yet. The profession isn't old enough. Now maybe the day will come when the person in charge of facilities is a senior vice-president and equal to the person in charge of human resources. And under that person you'll have a facility manager and telecommunications manager just like in my function.

I have a manager of planning and a manager of maintenance and manager of construction. Maybe other organizations are very different from mine, but certainly we get excellent cooperation within my organization because we have one person over all of us. If I feel strongly enough that something in telecommunications should be done a certain way, I report to the same person as the head of telecommunications and I can lobby from my point of view. And if I lobby strongly enough, I will always be heard and always be considered.

David Cotts:

. . . There are a couple of things that I think are very im-

Van Van Pelt

portant. It's wonderful to be an integrator. If each of the individual functions is not done and done well by a specialist, then you're going to fail in your job, and I think you need to keep your eye on that.

Maybe sometimes we just designate the wrong person as facility manager. Maybe that senior vice-president is, in fact, the facility manager in that organization, and that I think very commonly occurs as you look at organizations. . . . Still we've got people with savvy, people that can view things from a big picture without losing sight of all the parts. And I think that's something I don't always hear coming out of this group.

Nick Johnson:

First of all, I want to compliment Dave on focusing on the issue of integrating the services. If you think about what's happened in facilities management since 1979, you can get a little bit apprehensive or pessimistic about its long-term or even mid-term prospects.

Think about the fact, as Dave and others pointed out, that the elements have been around for not only centuries but longer—that when there was a guy in charge of slaves, another guy had to get whips. There was an architect somewhere—the king himself—and he said "I don't want white marble". . . .

We suddenly now are beginning to understand that there is this bundle of services, which, for a while, were the things no one else wanted or knew what to do with. It kind of evolved into a facility management organization. It's true in some places they're becoming unbundled, but in my own case they are becoming bundled. The way to a positive approach to accomplish what Dave's talking is to educate management. What we hear is "we need more parking.

Security is a problem. The new building isn't doing what it's supposed to. The cost of construction is going up." I think most of us in the room look at life cycle cost, that how you design a facility will affect how much the maintenance costs, whether or not security is easy, whether parking is available nearby, whether the mail is costing double or triple, the impact of telecommunications and the new technologies, et cetera.

I made a deal with my boss. Give me the bottom line, about $20,000,000. And what I said is give me the $20,000,000 and manage me on the bottom line, and I will integrate the services. If I have a problem over here, I'll take care of it out of these funds and working with the engineering folks, telecommunications, the secretarial services and the maintenance guy. By integrating the services—that's the word—we settle it basically in-house and provide more of a strategic picture to management.

It doesn't work that well yet. There are problems. People still try to split off services. . . . That will always happen. There will always be fringe elements. Maybe that is healthy. Maybe that is how you adjust.

Paul Lilly:

It's that degree of integration. How did you establish that bottom line to start with?

Dominick Prezzano:

The point that Dave made that interested me is that if you don't push marketing in organizations, it will disappear. I have to agree with that in regards to facility management. . . . Your key people at the top of the organization are normally those people that came from large areas of the company that were the money-makers. They're on top. So they

still view us as necessary evils or whatever you want to call it, marketing and facility management. It is a matter of education. Will it survive? I think you have to look at the individual organization. If facility management is still reporting to a low area in a company, it may not survive. It will always be a series of tasks and services.

I think we are getting past the point where we are the guys that pushed desks around. This is what we were thought of. . . . In our organization, we report right up near the top, and we didn't ten years ago. We report to an executive vice-president who also has all of our electronics, telecommunications, and human resources. All those services reporting to one makes it easier. The next man who gets involved is the president, CEO.

It's a matter of the facility manager getting the opportunity to report to the higher ranks, not to complain about all that we do, but to show them the services that we provide. I call us really an asset manager. This is really what we're doing. It's the people, the tools, materials, and the assets.

David Armstrong:

. . . I think that I'll stay with the marketing analogy a bit. There is nothing I can do in marketing to help the sale going on in Milwaukee today that I haven't already done. And so, by definition I have to be somehow out of step because I'm interested. I think that facility managers by definition have to be out of step with their organization because they are talking about things in buildings that are going to happen in the years ahead. The things that are in step are the maintenance or reactive things. Those are being viewed as necessary budget items. The others—I don't know if we can recognize the benefits from those yet. . . .

Tom Pratt:

I'd like to suggest that maybe we think not so much of what we control, since those are management issues. Maybe we should think about reaching out and capturing the facility plan as a means for true integration and as the means for elevating ourselves to a more influential position in a corporation.

Michael Wodka:

Sharon's [Bybee] paper mentioned that one of the things in the future would be the necessity for an MBA degree in the field. The last words in that interested me. We don't call those masters of business management but masters of business administration. The difference in management and administration in this area seems to me to be the heart of this discussion.... Could you comment, Jim [O'Toole], on those differences as a part of the question of where facility management should be versus facility service or administration?

James O'Toole:

I think the MBA as a role is rather well planned. We do train administrators and not managers.... The manager is the integrator. The manager must see the broad picture, and that's not what we get in business—at least not in most businesses.

Doug Sherman:

Facility management is a young field. Logic isn't enough. You've got to be an evangelist. I mean that in the real sense of that term. You've got to direct your evangelism in two directions. You've got to direct it upwards because people

don't understand the implications of facilities management. They talk about bottom-line results, but they don't know the bottom line. . . .

We talk about integrating. We've got to sit on top of a so-called profession that is split by what Dave used to call guilt. You can call them unions. You can call them trade associations. You can call them professional organizations, but every architect that worked for me regarded himself primarily as an architect. If you're going to make him part of a facility team, you've got to keep him hyped up, convince him that he's part of a lot bigger organization than just architecture. I think the same is true of real estate, space engineers, pipe fitters, you name it. I think at this point one of the critical things for people that sit towards the top of facility management is to be able to carry that message in a very evangelistic way both up and down.

Frank Yockey:

An observation. I'm actually fairly new to the area of facility management only having been in it for about five years. And as I talk to peers, both within our own organization and other facility managers, I hear a lot of talk that really is very defensive in nature, trying to draw boundaries, trying to define responsibilities, almost having to defend that particular position as opposed to really understanding tomorrow what it is that we should be, where is it that we're going. . . .

I know what I manage today is going to be different five years from now. Recognizing that, how can I put myself in a position to be proactive and become effective for the organization? It's difficult getting that time to put strategic plans together. . . .

Paul Lilly:

If you don't have the strategic sort of outlook, if you're looking from day to day—I say "how did I do today," that kind of thing. That leads to uncertainties. You don't know what you're going to end up with tomorrow, how are the chips going to fall for that activity or this change—do I know the bigger picture? Do I know what this corporation is doing?

David Streeter:

I would say from our experience in the last year, it's critical that you really understand your company's strategy and goals. Every time we get a chance to present to top management, we're presenting the space planning strategies or facilities strategy and demonstrating how they tie to the company's goals, whether they enhance revenue, profitability, the human resources' goals.

And we have been far more effective because we finally took the time to understand the company's goals and try to link our strategies and programs to that, spreading the message horizontally to our staffs to make sure they understand what those goals are and how we want to support them. At the same time you have to provide services well because that's where the criticism comes. If you don't have that under control and those services aren't provided well, you're never going to get to the big steps out in front.

That's one of the tough things I was mentioning to somebody last night. In the matter of two hours I'm in the year 2000, talking to vice-presidents about how big the company is going to be and impacts we're going to have, and then I'm back into the new engineering group we started up right here in the present. . . .

Les Cranmer:

We had the occasion to deal with a business school about facility management issues, and we had talked with a number of professors who were interested in looking at facilities and where it fit into the strategic plan. I did some literature research. Out of 100 textbooks I looked at involving strategic planning, only one mentioned facilities. So the people who are educated in business schools had no idea of the impact of the facility.

If we, in terms of facility management, develop educational programs and design schools and related schools, it may be a ten- to twenty-year journey to get up to the top of the organization.

On the other hand, if we can get facility management into the business school (the programs that the COOs are coming out of), it may be only five years rather than twenty years until that group understands facility management.

David Armstrong:

When we started Facility Management Institute, we put a bundle of money together and went to two business schools to argue this point. One was here in Ann Arbor and one was at Michigan State. They were not interested in the least. . . . When we met with the University of Michigan, they found it almost a joke that we would ask—that we would feel that facilities had any integrating capability; that it was really a strategic field.

Jane Stolper:

Let me respond to Dave Armstrong about the old Michigan State fifteen years ago when he tried to establish a program there. We are now developing one there. And it's based very integratively. That's our whole pitch, a very integrated pro-

gram. And the way we're doing it is by establishing it in a design school. We're doing it on the premise that we have undergraduates coming into a masters program. . . . Then we are able, through our liaison with the business school, to work with them in providing the really good kind of business background that they need. . . . So we almost feel that our program is doing an integrative kind of thing. That's what we're trying to do: give the field facilities managers who have those kinds of broad skills.

The other thing I want to comment on: When we talk about strategic plans and long-range plans, are we saying that all facility managers should be missionaries?

David Cotts

Can and Should We Define Facility Management?

I approach this topic from two points of view. First, I am a working facility manager. From this perspective, I will try to ascertain the usefulness of properly defining facility management to my ability to perform well as a manager. Secondly, I will emphasize the importance of defining facility management to the International Facility Management Association, the professional organization of facility managers of which I am an officer. Finally, I will counter several of Cecil Williams' well-developed arguments against defining facility management and conclude with some recommendations, possible next steps.

Initially, let us see whether we can define facility management; then we will discuss whether we should. Actually, this discussion is largely academic. Facility management has been defined (by Facility Management Institute, no less), and that definition was submitted to the Library of Congress which promptly accepted it. While there were understandable debates and considerable "word smithing" during the development of this definition, I am not aware of a single FMI member forced by a federal official to produce a definition of facility management under threat of thumb screws, water torture, or even impoundment of funds. The FMI developed a definition because it was needed and it could be done.

Actually, I have always felt that FMI and IFMA were either somewhat naive or somewhat arrogant about defining facility management. Facility management has been both well-defined and well-practiced on many large college campuses and in the armed services throughout the quarter-century of my professional life. Sometimes we who have tried to organize

facility management as a profession have been so pleased with our own invention—facility management—that we have been unwilling to adopt the methods, policies, organizations, and definitions of well-established, skilled practitioners.

At the heart of my argument, however, is the question of whether we *should* define facility management. You could argue incontrovertibly that this issue is academic. Facility management has been defined, both in words and in practice. More importantly, however, it is vital that facility management be defined and its functions delineated so that we can develop educational programs, research and—if the practitioners would value such a thing—a certification program. If we can't, won't, or don't define facility management, we have no baseline, no commonality upon which to build. No definition means no body of knowledge, which means no education, no training, no research. For too long, this has been our approach. We were not necessarily hampered in our current jobs (our bosses are used to what we do). But if we cannot agree on a definition of jobs and functions, we cannot improve, teach a new generation, insure compliance with professional standards, or eliminate charlatans. Before Art Hahn commissioned the January '86 IFMA White Paper, an acknowledged "95% document," we were not able to bring structure, substance, and practicality to facility management education and research. We have had enough "wheel spinning and pie in the sky." Now we can move forward within the same framework that other professions developed to educate and conduct research. Not only do we have a single line definition, but the IFMA white paper lays out the functions and subfunctions of facility management as it is practiced today.

May we never again return to the state of "do-nothingism,"

self-doubt, and suspended animation which characterized our search for the perfect definition and list of functions which would be immutable into the twenty-first century. We spent so much time intellectualizing and striving for perfection that we did not develop, teach, and practice the ninety-five percent of the art that some of us knew and practiced well. I say this with the full knowledge that facility management will change. It will change even if we think we have forged a perfect definition. There is nothing more constant than change. The definition may change; the functions certainly will. As that happens, we can redefine and change. There is still no excuse to avoid a definition of facility management that fits the current situation and can be the framework for rigor in our profession as practiced today.

Defining facility management is not currently the top priority that I face. However, my situation is not necessarily typical, and the situation at The World Bank is much different than it was five years ago. My point here is that a clear definition of facility management is important in the workplace.

Many facility managers are either new to the position or the sole facilities person in the firm. Many of these people either "grew" into the position or were hired to meet a perceived need in their company or agency. How is a new facility manager to know what is to be managed if it is not defined?

Those of us who have practiced facility management for years sometimes forget that what our jobs entail is not intuitively obvious. A new facility manager who does not know what he is doing can not organize to do it. The January white paper and IFMA Research Report Number 1 provided new facility managers the necessary framework on which to organize and structure policies, procedures, and standards.

A proper definition is equally important to the experienced facility manager in communicating with his management. If we cannot define for our boss what we are about, we struggle to explain it circumstantially. We cannot easily convince management (or even an organizational development department) of the need for long-range facility planning unless that need is inherent in a definition of facility management. Also, as bosses change and reorganizations occur, it is important that we have our functions well-defined and commonly accepted both within our company and by the profession at large.

As a conclusion to this section, allow me an observation. I have an opportunity to see many facility management organizations, most of which are in some degree of trouble—or I would not have been consulted to study them. Invariably one of the major problems is a failure to define the mission and organize appropriately around the known functions. I, myself, use the IFMA-defined functions as a checklist for rating the effectiveness of facility management organizations.

Let me turn now to whether a good definition is important to IFMA. Knowing your job is a basic tenet of good management of any kind. Necessary to knowledge of the job of facility management is an acceptable definition and delineation of the inclusive functions. We now have them, and they contribute to the practice of facility management in a practical way. Such a definition does not restrict; it expands value.

Important as a proper definition is to the practicing facility manager, it is absolutely essential to our professional organization. It is both the framework for new programs and the yardstick against which we evaluate existing and proposed programs. Again, here you face the question: If IFMA cannot define facility management, can it claim to represent

the profession of facility management? What is facility management if you cannot define it? This is so basic that I do not hesitate to restate it.

Perhaps no greater evidence of the need to define facility management exists than in education. IFMA has decided to pursue aggressively the assistance of colleges and universities in developing baccalaureate and masters programs in facility management. Initially, we often need to explain who and what we are to deans of colleges of business, architecture, design, or engineering. The IFMA definition of facility management and delineation of functions is a convenient way to do this.

IFMA is developing an undergraduate curriculum as a model for colleges and universities. The base document for this curriculum (and for a masters curriculum should we develop a model) is our facility management definition and functional listing. An academic curriculum by which we teach facility management must be based on a definition and functions laid out clearly for all to see.

Soon we plan to develop a methodology to evaluate the many courses, seminars, and continuing education opportunities available to our members. Whether a sponsor desires endorsement or merely publicity from IFMA, we will establish an evaluation mechanism. That mechanism will center on our facility management definition and listing of functions; our own educational programs will be similarly structured.

Similarly, our research program, to increase the body of knowledge, will be structured, documented, and catalogued to conform to a definition of facility management and the listing of facility management functions. We hope, in the near future, to have major research and data base collection efforts in each functional area: long-range facility planning, annual facility planning, facility financial forecasting and bud-

geting, etc.

Before leaving this section, I want to address one issue which I feel will probably bring Cecil and me very close to a common, philosophical "bottom line." IFMA must be sensitive to, in fact welcome, change. There is certainly a tendency to maintain the *status quo*. I do not worry that IFMA will follow that tendency. The January '86 White Paper was admittedly not the last word on either a definition or the exact delineation of functions. As conditions change, IFMA can change, although I seriously doubt that there will be such profound changes as Cecil seems to think there will be. We still receive assignments, plan, design, construct, alter, coordinate work, maintain, and repair today much as we did a quarter century ago. Only our standards and the technology to do our jobs better have varied much in that time. I see no major changes in the future.

Actually, my strongest disagreement with Cecil Williams has already been stated both explicitly and with examples. It is very simple. Without definition, there can be no development of a body of knowledge, no research, no education, and no training. For too long we have refused to codify, to define, or to state the rigorous understanding of our jobs that we all know exists. By refusing, we have turned aside many who looked to us for professionalism. We have created an extremely fuzzy impression among upper management, and we have confused the professional and trade organizations which provide us support and service. Because we have not defined ourselves well, no one is sure what we are.

Those of us familiar with FMI—particularly those of us with a fondness for our mother organization—realize full well that the philosophy there had been not to get too specific. Cecil has articulately stated the feeling that used to be per-

vasive at FMI, that stymied IFMA in its early years, and that has gripped facility management while I have observed it recently. Because we feared putting facility management in a straitjacket (canonizing it), we refused to put any intellectual teeth into a profession filled with managers, architects, engineers, and designers—people used to, and expecting, quantitative and qualitative rigor.

I travel widely, and when I do I "talk facility management." One theme prevails wherever I go and with whomever I speak. Facility managers want research, training, and comparative data for assessing themselves, improving their operations, and selling their worth to senior management. Basic to our ability to give them this is our ability to define facility management and its functions. Shame on us for waiting until 1981 to produce a definition and until 1986 to identify the functions.

What is particularly disturbing is that at the core of Cecil's statement is the key to reconciling our positions. Cecil fears putting a straitjacket on the body of facility management knowledge. Although I honestly believe this fear has been overstated, I admit that facility management could change. That Cecil and I can agree on. What we cannot agree on is that it is a reason for seven years of "do-nothingism." There is a middle ground; go with what we understand today and adjust as developments require. The need to get on with our business has prompted IFMA efforts to date.

I find it ironic that Cecil expresses concern at the multitude of individuals and firms advertising facility management services. This very phenomenon, perhaps more than anything else, should prompt us to insist that we bring rigor and discipline to facility management starting with a definition. Those of you who know me know that, since our White Paper

was issued, I have tried to use it as the yardstick against which to judge service providers, educational programs, and research.

Cecil's arguments really do not line up against defining facility management. He wants a definition to encompass "management attitudes and behavior that would release the potential of facilities," his particular area of interest. The problem with that approach is that it is truly limiting and does not at all describe the totality of facility management. A much more convincing view, it seems to me, is the one offered by George Trayer, a former IFMA president: facility management is merely a management function applied to a given set of facility problems at a certain time and place.

At the risk of redundancy, I simply must challenge Cecil's vision of facility management as a new discipline changing rapidly and threatened by any attempt to define it. Large-scale facilities have been managed on our campuses and in the military in a sophisticated and well-defined way throughout my professional lifetime. The technology is changing, and some problems are emphasized at a particular time more than others, but I simply cannot view facility management as "flowing too fast for us."

If defining facility management has led us to "attitudes and practices which may curtail and guide us," then why do facility managers continue to ask IFMA for more models, better guidelines, and better performance indicators? It is because facility managers are asked to provide effective, efficient services across the facility management spectrum. We do address management attitudes. We do concern ourselves with maximizing the potential of facilities to support a business plan and to improve the quality of life of employees. But it is also important that the boiler receives its five o'clock

feeding, that pencils are delivered, that alterations are done according to an appropriate level of design, and that there is paper in the toilets. We deliver all of these services best when we can compare our performance against others. That can be done only with a common definition of functions.

I am, in fact, skeptical about Cecil's cynicism, for none is warranted. We fully agree that a definition of the facility management system could be the basis for excluding practitioners (certification, licensing, endorsement, etc.). However, the professional association of facility managers, both by executive action and in open session, has rejected that approach. Contrary to using better definition to exclude newcomers, we are using a definition to help all sorts of facility managers, both experienced and novice.

Curiously, I find myself buying into much of Cecil's concluding remarks because, it seems to me, he has run up the white flag. He offers suggestions on how to "describe" facility management. I contend that he is really making suggestions for an improved definition. Regardless, I feel he makes several valid points. I would also like to stress in our definition the need for both effective and efficient compliance with a company or agency's work or business plan. Also, I absolutely agree that good facility managers and IFMA should insure that facility management is tied to the corporate (agency) mandate, stresses good financial management skills, and is communicated well by articulate spokespersons.

Finally, the point to be made is that the time is right to define facility management. Failure to do so was hindering growth. Lack of a definition fostered the image of a group without direction. IFMA saw that and corrected the situation in the January '86 White Paper.

Facility management will grow and flourish; IFMA will

flourish with it. Some change is inevitable (but can hardly be as dramatic as Cecil has painted here). We definitely need to be attuned to changing our definition if developments in the field warrant it. Experienced facility managers always knew where they were "at" more than they were given credit for. They do have a vision for the profession. Their collective experience can be taught, researched, and shared with others facing similar experiences. Basic to that vision is a definition and delineated functions. IFMA's January '86 White Paper is both a framework for organization and evaluation and a baseline from which we can make changes if necessary. We should work hard to preserve a flexible yet concise, a structuring yet non-restrictive, definition into the future.

We must never return to the ambiguity, self-doubt and image of indecisiveness that the lack of a definition thrust upon us. Each of us and our professional organization will grow and flourish with our commonly accepted definition to sustain us.

Discussion

Perry Johnson:

Our president has a saying: If you can't measure it, you can't manage it. I think a parallel is if you can't define it, you can't do it. I think a definition of facility management has to be flexible because the profession is always changing. My job description shows my responsibilities and authority along with the boundaries, but it isn't written in concrete and is periodically changed.

Rem Stokes:

That's true of any discipline—every discipline that is dynamic, from being a husband to being a mechanical engineer. That calls for a revolutionary type of definition. We live with that ambiguity. Nothing is wrong with it.

Ken Von Rohr:

I seem to feel more comfortable with the word description than I do with definition. There was a time in facilities where it was helpful to have an outside professional stamp of approval on what facility management is all about. It's helpful to describe facility management, but only in broad terms as far as I'm concerned. I don't hear the financial managers struggling with what they're doing. . . .

I've been more interested in trying to describe the elements of facility management that can be communicated internally in terms of providing the proper charter in which to operate within the corporation, with a bias perhaps toward strategic functions. . . . I'm considerably more interested in developing the credibility within my organization to speak to the broader issues of impacting corporate

goals. . . . I think it's certainly been helpful to try to describe what we do. I'd be very nervous if we struggle too hard to develop a narrow definition of where our profession is. . . .

Jeff Scherer:

As an outsider, it seems like you're splitting hairs a little bit. One views definition as limiting, and another views it as broadening. For me, it should be more a question of goal setting and, in Rem's terms, those goals are redefined everyday. I know in my own profession, there's a lot of anxiety, for example, about interior designers wanting to become registered in our state. That sometimes is considered a question of turf, sometimes considered a question of pride. But defining what an interior designer is versus what an architect is has gotten incredibly complicated, and I think it was unnecessarily so.

I'm a little nervous about Cecil's nervousness because it seems to me that the clarity versus confinement issue is one that seems sort of a matter of common sense. You need to have clarity, but having clarity doesn't necessarily mean you're confined to live within that clarity.

Mel Schlitt:

. . . I think in order to expand and educate people on what they should be doing, you have to start from the current practice. In the last five years, we have been investigating what people are currently doing. . . . I think you have to start there. If all we did now was take what we found and just say, "Okay, we're just going to leave it at that, and we're going to improve upon those methods," we would be making a mistake. If you only improve the services or the current practices by trying to make them more efficient,

you're not going to advance the profession. . . .

By pushing it further, we can help organizations realize that there is an impact. One of the key findings that came out of looking at how people currently do facility management is that the weakest link in all these responsibilities is the first one—long-range facility planning. That wasn't even done five years ago. Now, people are coming to me every day saying, "I've just been told to do a long-range facility plan," and asking how to get started. . . .

John Adams:

Somebody once remarked that needing an agenda for a meeting was something like needing a negligee on your honeymoon. If everything goes all right, you don't need it. It seems to me it's a little bit the same way with this business of defining facility management. When things fall into disarray or we run into territorial problems, we find ourselves resorting to this question of definition. . . . It seems to me an awful lot of the time when people are being effective and doing facility management, the necessity of having a definition really falls way back into the background.

Nick Johnson:

I'd like to take that one step further. What we're talking about is taking the facilities management business from a bundle of services to a strategic, general-management position. And to get there, I think it's a good idea to describe it, teach about it, publicize, advertise, etc.—but in a general management way.

One of the things I would disagree with is the talk about certification. I think it's okay to certify architects, engineers, or CPAs, or whatever. If you compare this to a vice-

president of manufacturing or vice-president of marketing, or vice-president of finance, you'd never even entertain certification.... What probably is advantageous is to continue to describe our activities in more of a strategic way....

Rem Stokes:

Just an observation on this. I've noted in job descriptions that the further down you are on the ladder, the more detailed the job description. As you get up higher and higher, job definitions get to be global roles. The chairman of the board of AT&T had a three-word job description: Make money safely. I really believe when you start talking about the definition of facility management, you're really saying, "I'm going to provide and maintain the optimum working environments." You scratch out that turf, and that is yours, and you wait for someone to object to that.

Sharon Bybee:

I've found that descriptions or definitions have been helpful to me in carrying out the teaching aspect of facilities. It's been helpful to me to know what to do beyond putting out fires—which I do a lot of. And it's also been helpful in gaining credibility within the group.

What usually happens is that some poor soul in the group that we're working with is designated as our contact and is told it will take ten percent of his time. As the project goes on, it ends up being eighty percent of his time. He sees the conflict we get involved with in dealing with his own people, and in a way, he sort of gets on our side. And gradually these people realize that if we have some way of describing or defining it, it gets more people on our side and helps them to realize that what we do is both credible and requires some training. To me that's progress.... I

think that's a way of raising consciousness, if you want to call it that, about what we do.

David Cotts:

I would ask . . . how are we going to represent ourselves to the outside world? We need to move out of the place where all training is on-the-job training. We need to start putting people out of our colleges and universities with solid backgrounds in facility management. . . . We have to be able to approach those colleges and universities with a model of . . . what might be an acceptable graduate for an entry level facility manager.

One other thing: You all sound like everybody came into the organization as a senior vice-president or vice-president. What about the young people who are probably going to be responsible for a single function? Their ability to manage is going to determine whether they become a senior vice-president. I'm looking for you to have the greater vision. It isn't just what goes on in your company. What about the profession twenty years down the road?

Houston Welch:

I want to ask Dave [Cotts] a question in regard to education. What do you visualize as entry level positions that could use somebody with a degree in facility management? It concerns me a little bit because I know management graduates from business schools who had great difficulty fitting into the bottom of an organization since for the most part they seem to be trained to be upper level management. . . .

David Cotts:

I could talk for two hours on this. You make some extremely good points. And I would make sort of one general point,

and then I will address your specific question. When we queried the membership [of IFMA] about . . . where should facility management be taught, there was some disagreement. The general consensus was that it should be taught in the school of business or management. There are two problems with that. Number one, they wouldn't talk to us. Our experience is very much Dave Armstrong's experience. Number two, as we started going down and actually trying to build course work, the skills were so many and so varied that it probably did not actually justify going into the business school. You probably need a multidisciplinary college or university. A large one can probably handle it best. And I can see it being in the design school. I can see it in the department of architecture. Texas A&M is trying to get it off the ground right now.

In our own organization, I would like college graduates. As an example, I would like our senior designer not only to have an architectural background, but also a facility management background. I tend to have to implement the designs, designs for facilities that have to last. . . . We hold onto our facilities forever, and it's important for them to function. . . . I think there are any number of entry level unit level chiefs or section level chiefs that I would like a graduate facility manager in. In a couple years down the road when I get ready to move down, they can move onto that level.

Michael Wodka:

One of the things I'm hearing here is something that probably happens to almost every profession. As soon as somebody gets a handle on a definition, a whole series of branches start coming out of it. You get subsets. . . . Maybe we're talking about a large definition for a broad, general

field, but the reality is made up of a series of branches that we haven't been able to get handles on. Some people might be more oriented to the pure side of management. Other practitioners still holding the title facility manager may be off on another branch.

Tina Walden:

I guess I'm enjoying both points equally. It takes two hands to hold the water. . . . One hand is going to have to hold all these tasks, all these services we don't want to get trapped in. We all have a list of tasks, services. . . . On the other hand, we're going to have to hold onto those visions. Even though we swap and share stories, the only way we're going to take them out of the mundane is come to groups like this and get together.

Dominick Prezzano:

I think it's been said that there are so many facets or tasks to facility management. The more I think about it, it would be interesting to find out how facility managers backed into this, if you will. I think we came from all walks of life. I think that one thing unique about being in the facility management game is that the people who do this have to be able to chew gum and skip rope at the same time. . . . When our phone rings in the morning, ten different, unrelated things are happening. . . . You have to be someone who can manage people because that's really what it is.

Cecil Williams:

I keep waiting for somebody to speak for these professionals that we're talking about managing. Why doesn't somebody say it's wonderful to be trained as a designer, function as a designer. After I've functioned as a designer

or architect or engineer for ten years, then I can take some courses or whatever and become a facility manager. . . . These generalists we're talking about won't come from the training in undergraduate programs. It seems to me that part of our job as facility managers is to encourage the academic institutions to train these people really well, the specialities, I mean.

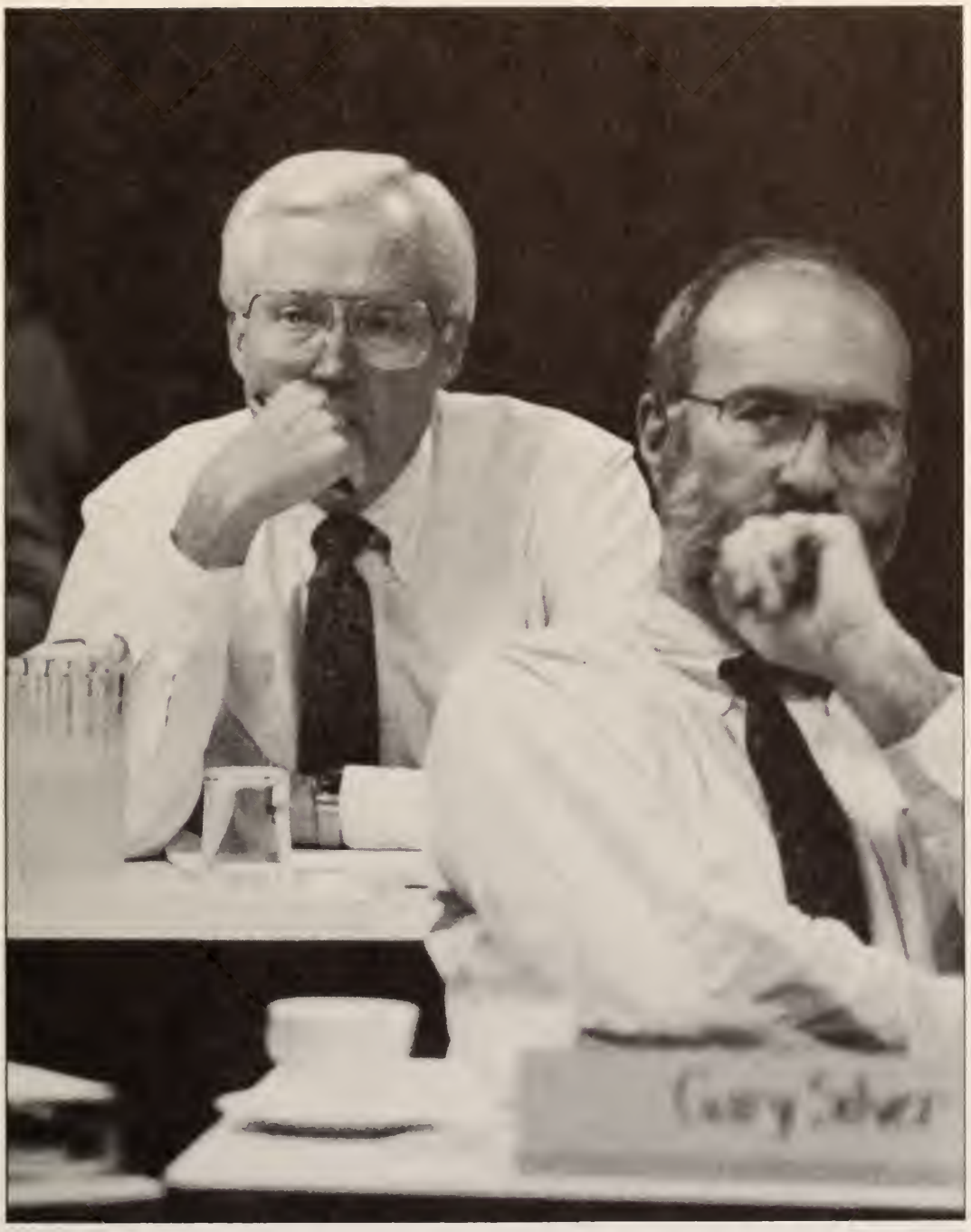
Secondly, I think that while we all would like for undergraduates to come out with specialities and with good people skills, our academic colleagues here recognize you only have 120 hours in an undergraduate program. Most of the specialities right now are having a hard enough time getting all the technical things into an undergraduate program. Why add something else?

Jeff Scherer:

I don't ask my daughters what they're going to be when they grow up. I like to ask them what are some of the things you're going to do as you grow older. I think one of the roles that people with a lot of experience need to play in this is to answer the question of what the mentor really was in a historical sense and the role of an intern. You set the expectations for that new person by how you define what the goals are going to be, and how they are going to grow over time, and how they are going to move up in the organization. If that mentor status is really well defined, . . . then I think the generalist and the specialist can develop together.

Jane Stolper:

. . . Most of the telephone calls that I have gotten are from people who are in a very specialized position and want to



come back and switch their roles. They're very interested in broadening their experience. We've had calls from architects. We've had calls from engineers. So I think what Cecil's saying is certainly true. These people really have their profession under their belt, and I think they are going to be your strongest facility managers.

David Streeter:

I would struggle with the fact that the person coming out of school is a good manager. They're unproven. They can have the background. They can have the courses, but I think they've got to get experience. . . . We can give people opportunities to try and be a manager and see how they do and switch them back over if they don't work out.

Stephen Margulis:

I agree with you. If they don't have the skills to begin with, they will never make it through the first year, and they're out.

Susan McGrath:

Look at an analogy. . . . A CEO doesn't go to school to learn to be a CEO. Okay. They take this course and this course and this course. They'll take marketing and sales and human resources and facilities. . . . Each of those people comes out of school as a lawyer or an engineer. They learn through experience to manage not only what they knew, but also other disciplines. And they learn to hire good people, and they learn to ask the right questions of those people. So if we have a lawyer that runs our company, he can deal with marketing issues because he knows that company and he knows the right questions to ask.

In the Chicago area there is a junior college that has developed a facility management program. In my opinion it's a total waste of time. I guess I feel that this is a graduate study. As with an MBA, you get a base in finance or business administration or marketing, and then you go on to learn the general talents or the general academics of managing. . . . It's strictly my personal opinion, but I just don't believe a two-year program is really going to produce professionals.

Houston Welch:

I don't hire managers in an entry-level position. They come out of specialties as Cecil said. I hire designers or architects or engineers or whatever, and they move up. As Sue said, then they make a transition into management opportunities. They avail themselves of in-house opportunities or other ways to get these management skills. I would agree with Sue. Facility management's not an undergraduate program because what you're talking about is that a facility manager is first a manager. And whether you're managing facilities or marketing or engineering or whatever else, you're using management skills.

Frank Yockey:

Indeed we don't hire managers. We hire individuals, contributors, people that have some basic skills. Then they learn about the company, learn about some of the culture, and can work into and grow into a management position . . . .

Gary Silver:

It is important to stress the facility management field rather than the individual practitioner. We seem to have

ideas about the definition of facility management on one hand and facility managers on the other. I think those are two very, very, very different things. I think that the definition of the field is more important. These specialists, these architects and planners that join facility management staffs, I wonder—do they think of themselves as architects and space planners? Or do they think of themselves as facility managers on a track toward some more global type of responsibility? We have to motivate people who have guild images to identify first as a part of the facility management team. . . . I wonder whether the senior vice-president is a facility manager. Who IS the facility manager if the whole point of what is being said in these two days is the notion of integrating all these specialities? At what point does it coalesce? Does it matter as long as it's being done and the goals of the organization are being served?

Rem Stokes:

In most companies, management is a part of the reward for having performed within one discipline, developed a set of skills, developed the experience, shown sensitivity for working with people, integrating functions. Most of us are given management jobs, not hired into management jobs.

David Cotts:

Absolutely, and I think that's a very, very important point. . . . One last point because it's very interesting. The American Institute of Architects has approached us at IFMA and said that they're very concerned about the practice of architecture. For one thing, they said they're not keeping their people entirely happy for a lot of reasons, and some

of them might want to cross over into facility management. And, secondly, they need to know more about facility management than they do now.

We might have thought, here's a threat. Here's big AIA. They're going to run right over the top of us. Really, if we're professionals, we deserve to tell them what we know about facility management. That is going to help them serve us better, and so I'm a member of one of their committees. And I'm called in about once a month to discuss issues that we're discussing here today.

Stephen T. Margulis

Where are the Role Models for Facility Management?

John Adams, in his very thoughtful paper, concluded that there are no role models of good facility management because "The profession is simply too young, although the activity of facility management has been around for decades in one form or another." By role models he means not only individuals whose performance would make them the Mickey Mantles and Frank Lloyd Wrights of this new profession, but also the organizations whose facilities management programs could be described as exemplary.

We think this conclusion is debatable. In the absence of standards or an agreed-upon jury, the question is likely to be unresolvable. In this regard, John makes a strong case for the formative nature of "office" facilities management. Because it is in its formative years, it is "still too fragmented a discipline, dependent on its context for success. It is too situational, and it is too early." This condition precludes clear and consistent standards.

Let us suppose that, in fact, there are no agreed-upon individual or organizational exemplars. Are there other classes of role models to consider for "office" facilities management? There is one other possibility. Other kinds of facilities managers could be considered, collectively, as role models for those facilities managers whose principal responsibility is office space. This suggestion raises its own questions about the nature of facilities management. Together, these possi-

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Note: Stephen T. Margulis and Jerome C. Conrad of CONRAD & WOOD Technologies co-authored this paper.

bilities and questions will be the first issue we plan to address.

A second issue follows from John's speculation about the development of role models for facilities managers and facilities management. His thesis is that individual role models will be high achievers who are both versatile and inconsistent, who will, in the absence of standards, consensus, or paradigms, knowledgeably choose among formulae and methods to meet their own needs. To be knowledgeable requires expertise, that is, a mastery of relevant knowledge, however defined. From this, John concludes that "the next order of business . . . is the creation of that expertise" and—this is critical—that only those in the "front lines" will ever accomplish this task. In John's words, "For that reason, the next era of facility management belongs to the practitioners—not to the consultants, not to the architects, not even to the manufacturers of furniture." This conclusion is the second issue we will address.

Issue 1. Other kinds of facilities managers may serve as role models for office facilities managers. This proposal begins with a matter of definition. First, there are at least three uses of the expression "facilities management" (or, if you prefer, "facility management"). The most general use (use #1) refers to people responsible for facilities as such: offices, hotels, hospitals, stadia, auditoria, prisons, educational facilities, industrial and production settings, laboratories, research settings, and the like. If you define "workplace" very broadly, this use is consistent with the definition from the Facility Management Institute already cited several times during the symposium: "Facility management is the practice of coordinating the physical workplace with the people and work of the organization. It integrates the principles of business administration, architecture, and the behavioral and engineer-

ing sciences."

A second, more specific, use (use #2) implicitly focuses on those who, more often than not, have responsibility for office space and, depending on the organization, for manufacturing, laboratory, and warehouse space. The members of the International Facility Management Association and John's examples illustrate use #2.

Last, facilities management is also used, most specifically, as an actual job title and department name, though many individuals and departments that practice facilities management do not necessarily carry this title.

We would like to employ use #1 to call to mind groups involved in facilities management as role models for use #2 facilities management. One such exemplar is the Association of Physical Plant Administrators for Universities and Colleges (APPA). Founded in 1914, it has seventy years of experience in facilities management, and 1,200 institutional members worldwide. It trains facility managers responsible for the administration, operation, planning, and development of higher education facilities. It disseminates information through meetings, training programs, seminars, and a variety of publications. Note the name of their official journal, *Facilities Manager,* and their recent, hefty publication *Facilities Management: A Manual for Plant Administration.* The APPA has targeted this manual to facilities professionals in industry, hospitals, and the military. These groups give some idea of APPA's constituents.

APPA members are being buffeted by problems much like those confronting corporate facility managers—limited resources, rising costs, aging physical plants, new building materials and construction methods, and changing technologies. They, too, must apply appropriate financial methods to de-

cisions (about energy conservation, deferred maintenance, and modernization and renovation of facilities) and express the need for sound management skills for plant administrators and technical skills for their staffs.

Another possible exemplar is the American Institute of Plant Engineers (AIPE), founded in 1954. Its 8,600 members, largely engineers and engineering supervisors, manage and operate industrial, manufacturing, institutional, and commercial facilities. Like APPA, it distributes information in many forms, including the association's journal, *AIPE Facilities Management, Operations and Engineering.* AIPE also certifies plant engineers and presents awards for "facilities management excellence."

As with the APPA, AIPE's members face a number of challenges (in the words of executive director Michael J. Tillar): "changing trends in technology . . . the increased emphasis on computerization [in] the entire facilities management function . . . [demands for] increased productivity . . . and just being able to adapt to the changes in an industry and the restructuring of the internal organizations which may result." The greatest problems facing the profession are "the demand for increased productivity with budgets that tend to decrease each year . . . gaining recognition for the positive contributions that [members] make to the bottom line of the company," and the importance of being "capable managers."

The two associations have the makings of role models, though we must admit that organizational longevity (which these two groups certainly have) does not *necessarily* entail success. Defining and establishing the success of APPA and AIPE at use #2 facilities management will make or break our proposal.

Here is another example of a role model from another area,

operations resource management. Jerry Conrad's and my comparison of types of facilities managers suggested to us that although their facilities (hence, technical methods and challenges) are likely to differ, management skills and problems are likely to be shared. All facilities management departments have the same problem: ensuring the quality of working life while contributing to the organizational bottom line by helping operating units work efficiently and effectively and by delivering facilities services efficaciously and efficiently.

Many processes and methods have been developed to address this problem on the production side of companies by operations management and related disciplines like industrial engineering. However, with the shift from an industrial to a post-industrial, information-based, office-focused economy, the problem of proving worth has arisen, again, in the office. Conceptually, then, operations management offers a model for demonstrating the benefit of facilities management to the organization's mission and bottom line. It might highlight, implicitly, how a shared facilities management problem, generated by the nature of the setting and the work, leads to work-specific processes and methods for problem solution.

First, the stated problem and possible solution fall more on the "management" than on the "facilities" side. However, this approach does not minimize the need for technical expertise in managing the solution of "facilities" problems.

Second, an obstacle facing facilities managers of office space is, as John has pointed out, the lack of a readily recognized need for, or acceptance of, office facilities management. In manufacturing and industrial work, facilities management methods, that is, traditional operations/production management, have existed for years. We shall try to answer why this may be the case.

Operations management texts and the success of this discipline are both closely tied to production processes, to manufacturing and industry. Yet, according to Richard Chase and Nicholas Aquilano *(Production and Operations Management)* and Richard Schonberger *(Operations Management),* the essence of operations management is the means-ends relationship between resources and their transformation into desired outputs. Facilities, of course, are an organizational resource and, as such, must be managed. It follows that an "operations management of the office" makes sense in principle. We will call this "operations resource management," so that labels aren't confounded. This, then, is a model for facilities management. What, then, does this model imply for facilities management and facilities managers?

First, it can link resources (such as space, equipment, and material) to the functions of operating units in support of organizational goals. Second, it can consolidate and integrate information to support the organization's and operating units' missions and strategies. The integrated information tells the organization precisely what it has, why it is needed, where it is used, and what it costs. It allows the organization to plan for additional resources and to manage, track, and inventory all of its resources. Last, it provides a precise auditing and accounting for facilities-related operational tasks.

The approach we're proposing begins with in-depth reviews of the organization's operations by the organization's administrative services unit, including its facilities management department. The aim is to establish appropriate informational links that cover the organization's operational needs and the resources provided to each operating unit. This process *forces* the organization to recognize all of its re-

quirements.

Next, administrative services provides each operating unit (and itself, as an operating unit) with complete and correct consolidated information about its use of resources. These databases allow the operating units to manage their resource requirements in terms of mission, strategy, and personnel. A direct link now exists between the requirements of the operating units and the strategic plans of the organization. This link also provides a basis for organizational efficiencies of operation and expenditures for resources.

To sum up: For facilities management departments to provide appropriate services to the other operating units, they must know the strategic plans and goals of each of these units, how each aims to reach its goals, and hence, what resources will be necessary. This allows facilities managers to compare what is needed with what is available, what is in use, and where the resources are. They can also establish what additional resources are needed and by whom. Such knowledge is a precondition for cost containment, and such information leads to better estimates of costs. It also better justifies requested funding and helps the organization ensure that resources projections coincide with need and with strategic plans.

Are these ends being achieved? Not too often. This is one reason why "office" facilities management has not been wholeheartedly adopted. Companies have done far less to understand, learn, or control the exact costs of office operations than to control wages or production costs. They also tend to lack complete resource management programs. For example, they do not have corporate-wide inventory control methods for their offices. Moreover, a manufacturer who could break down the step-by-step cost of producing a prod-

uct would not be able to provide like information for office work.

This is a serious matter for two reasons. First, offices are becoming the major corporate expense. Second, while organizations tend to rely on gross or average costs for services such as utilities, communications, supplies, and furnishings, aggregated costs usually cannot provide a sound basis for a definite course of action. The constituent costs are what we need. However, these constituent costs are usually collected solely for the purpose of summarizing them!

In the end, a facilities management department must provide each operating unit with complete and accurate details and associated costs of goods and services used. This provides a basis for cost reduction and containment to take place where it must take place—in the operating units, themselves. An example of an available methodology for making these determinations is the federal government's Consolidated Administrative Management Information System.

In sum, operations resource management, following the mold of operations management, will allow facilities management departments, as part of administrative operating units, to improve their services to the organization and also reduce and contain costs, if they have not done so already. To do so, they must be able to establish the benefits their services provide (using, perhaps, the procedures of Michael Brill and others in *Using Office Design to Increase Productivity*), and they must know the actual costs of the services and resources they provide. The essential means to this end is an information system that completely and accurately collects and consolidates information from operating units about resources, including the why, when, and where of facilities-related expenditures.

Developing and implementing such processes and methods and having them institutionalized is a difficult, but a one-time, effort. After that, it should be a standard operating procedure. Proper benchmarks and analytic procedures can measure benefits and savings. Because of the productivity problems associated with the shift from the shop floor to the office, and the need for companies to be "lean and mean," operations resource management programs are badly needed. The good news is that they are now financially and technically feasible.

Remember that some forty years ago manufacturing and industrial organizations faced similar problems in their production facilities and, through operations management and related management procedures, have now witnessed significant improvements. Now organizations must make the same commitment to the post-industrial, information-based office facility. Administrative overhead, which includes all facility-related expenditures, must be separated into its specifics and then tied to the requirements of each operating unit. Operations resource management is one way to do this and, if successfully implemented by facilities managers, could secure their place in the hearts and minds of grateful executives.

Issue 2. A third proposal involves answering the following question: To whom does the next era of facility management belong? For John, the answer is the knowledgeable—that is, expert—practicing facilities managers. For us the answer is intimately tied to how and by whom that expertise is inculcated. Expertise can evolve through on-the-job experience—learning while doing more or less on one's own—apprenticeships, and observational learning with practice but without directive feedback. All of these approaches are legitimate examples of vocational training. All of them can be carried out

"in the trenches." Though they are evocative and practicable, they are not the most efficacious way to inculcate expertise and to create the facilities managers of the future. Rather, in-school education is the most efficacious means. This is our third proposal.

The next order of business, then, is to produce well-trained, knowledgeable, future facilities managers in college classrooms using curricula developed with the guidance of practicing facilities managers. These focused curricula, responsive to the evolving needs and cumulative experience of "case-hardened," committed, innovative managers, would be taught by faculty who care about teaching and the future of facilities management. Jerry Conrad and I favor degree programs to ensure a fully developed and broadly based educational experience. We also recognize the need for alternative educational programs, such as certificate programs.

Whatever the program, the curricula should integrate principles, procedures, and skills in business administration, architecture, and the behavioral and engineering sciences—the four areas from the definition of facilities management used by the Library of Congress. We would also recommend: 1) extensive, hands-on project experience to illustrate concepts in use and to sharpen skills; 2) internships for sustained learning in actual situations and for on-the-job self-development, apprenticeships, and observational learning from experienced facilities managers; and 3) a heavy dose of hands-on computer experience, including familiarity with a range of applications software (e.g., CADD, communications, data base, project management, inventorying).

The proper balance among the four instructional areas and the specific content of each area will continue to be a matter of debate (simply read Dave Cotts' manuscript

" 'Master'ing Facility Management") for the reasons John Adams notes—an absence of standards. Under these conditions, decisions about curricula are best left to teachers with guidance from practicing facilities managers. The more that advisors and teachers know the important operational realities confronting facilities managers, the more their curricula will be on target.

John Adams is correct: We cannot do without the facilities managers on the firing line. But they can't lift the profession by its bootstraps. Professionalization and education go hand in hand. This is our proposal.

Discussion

Perry Johnson:

We are each very unique. We have the same tasks ahead of us. We have different cultures, different philosophies in the corporations. Because of that, I suggest we look more at the philosophies and accomplishments and achievements of our role models. In talking with Dave [Streeter] from DEC last night, he added 1,400 engineers in one year. That's a role model to me. How did he accomplish that? I turn a lot to facility managers. I can always find somebody else who's done it a little more uniquely, a little more differently. To me, a role model doesn't mean a positive impact. Sometimes it's a negative. Internally, I look at personnel: "How do you deal with people?" I look at public relations: "How do they convince the financial community we're doing great when we're only at one-and-a-half percent net profit margin?" Field engineering: "How did he accomplish four hour response time for service?"

I suggest that in trying to better ourselves, we look at the parts and not the sum of the parts.

Rem Stokes:

I don't think you need a physical role model. You can have a role ideal, and sometimes that's even better. I don't think facilities management will ever pull itself out of the doldrums until it changes from a cost center to a profit center. . . . What I'm suggesting is that if the facility department begins to do research, I will wager the company that as much as you increase the pay scale next year, I will increase the product that much or more. And I will wager my job that next year's total cost picture will be less because you

allow me to function in a creative mode—a proactive mode rather than a reactive mode. And I think the facility managers will get up and be the creators of the future instead of the lemon Pledge polishers of the present. I'm really looking for someone who can embrace the technology available to us out there and apply it to the office environment.

Chris Banks:

I want to respond to what Rem is saying from the point of view of an architect that does exclusively interiors. I think we are reaching a level of frustration. We have continued to refine the office to a greater and greater degree, but we're not making that jump to create an environment where people work a little differently.

. . . Nothing would be better than to work in a situation where you deal with real problem solving, someone defining the problem differently than they have been defining it in the past. That's really when you begin to have creativity. You don't get to be creative by refining and refining and refining the same basic idea. I think that is where we have been in interior architecture for probably ten years.

Dominick Prezzano:

John [Adams] mentioned something to the effect that the facility manager is a concept. My understanding of concept is something that is in a beginning stage and doesn't yet exist. I certainly think in many organizations it exists today or we wouldn't be were we are. . . . The organizations that have adopted facility management and the electronic devices that are the management tools of a facility manager, have in fact, cut the costs of doing business today.

John Adams:

I appreciate those comments. I do think that . . . facility management exists as a concept or theory. I do believe that what is conspicuously lacking, at least in my judgment, is a number of practitioners to whom you could point. There are certainly lots of us out there but none that approach the concept as we have described it: a set of ideals to shoot for.

Although, as with the perfect golf swing, at some point I want to see somebody do it just to make sure it's possible. I believe that many of us have the itch to see somebody do it. I think that more than anything else, it would push the profession up to the next level of sophistication, and I think there is a lot of potential. A lot of seeds have been sown. Some things are beginning to come up, and I think that's what we have to look forward to in the next five years or so.

Marty Dugan:

I think that it would be kind of healthy before we adjourn today to talk about where there are good examples of integration, where there have been chances to push that, and where people have fallen short. . . . For instance, there may be a sense in the group that a guy like Dom may have a model program, maybe we're seeing a real integrated program when Susan talks about reporting to her vice-president. . . . Does anyone here feel your programs are bordering on being models?

Dominick Prezzano:

I would say yes and qualify it in this sense. You have to keep in mind that my organization would have to be modified

to fit in your organization, according to your cultures and whatever the company's corporate objectives and goals are. . . .

Susan McGrath:

I guess I feel, really—dare I say yes, I can be a role model to facility management? I came to FMI for the initial seminar, the basic seminar, when our company was 300 people, and I learned what a facility manager was. I went back to my boss. I said this is wonderful That is what I'm supposed to be, and he said, "Go be it." And I went, and I was it. When I look at the job descriptions that IFMA publishes, they match mine identically. I realize how tremendously fortunate I am because I have an open door to my chief operating officer. . . . I know I have the groundwork, and I am building a very effective facility management department. I don't have telecommunications, and I don't have systems. But I have enough say in what goes on that if they don't perform, I can get somebody here and work up some cooperation. I am very, very fortunate.

Can I also respond to something Rem said about a research group in the facility department? I don't see a need for a separate R&D group. I see that creative problem solving is your research.

Michael Wodka:

I want to get to the question that John raised about the customer . . . . There seem to be a number of constituents in the organization that represent the customers. You may be heroes to the people that sit in the workstation and do the work, and you may be real duds to the people that look at the bottom line and say, "Why are you spending so much money?"

Susan McGrath:

If the senior manager is not going to be happy, you've got problems. That is a big piece we have to manage.

David Cotts:

I have heroes, and I have many heroes in facility management. It is literally true that I seldom ever go to a chapter meeting of IFMA that I don't learn something from a young person who is there that has one-third my experience. But to say that we don't have heroes because nobody can see the big picture, I think is wrong. I do agree with John very much; it's very important to have heroes. . . . I guess I buy into your premise, John, that we should have them, but I don't think the only heroes are people that are going to be senior vice-presidents of facility management.

Paul Lilly:

I'd like to go back to Dom and Sue a moment, and ask if for some reason you were to leave your organization quickly, do you feel what has happened in your organization would continue without the personality of the person who got things going? . . .

Dominick Prezzano:

I think it would grow. I learned a long time ago in the military that you should always have a good exec being trained for your job. We have more than one. We are really dealing with the top of the company in all strategic decisions now. We try to look for the next regime in a huge organization like ours. We educate that individual—but after he gets to the top. . . .

Susan McGrath:

I agree. If I were gone, they would hire somebody. My boss expects a certain standard of performance. . . . He'd hire somebody who could do the job or possibly promote from within. If that person struck out, he'd get rid of them and start over until he got somebody. The standard has been established.

Paul Lilly:

Neither one of you referred to policies and procedures that are in place or anything like that. Many times we've seen companies that asked for policies and procedures. "We'll implement them," they said, "and it will be a good organization." I think that is not the case. Many times they are looking for cookbooks. I don't think that is a role model.

Susan McGrath:

That's not a manager. The manager has to take those and make them work.

Chris Banks:

I think there are two audiences for heroes, and I'm not quite sure whether the heroes are actually the same to both audiences. One audience is the emerging profession of facility managers looking for a role model. And the other audience is the business community whom you're trying to educate as to what facility managers can do.

I look at what we've been through in ten years of trying to educate the public about interior architecture, and until you reach a certain level, you can't really achieve all that you want to until people expect a certain level of achievement. . . .

Corporate Design magazine features the facilities manager in charge of new projects. Those are heroes, part of a successful . . . team, the architect and facility manager, that has created a facility.

On the other hand, business executives don't read *Corporate Design* and *Facilities Design & Management.* They read *Forbes* or *Fortune,* and it's very rare that you find profiles and case histories there dealing with successful facility management. I think there should be an attempt to get into that part of the media as well as preaching to the choir. . . . You have to jump into the realm of the other people you're dealing with.

Philip Stone:

I have been thinking over what Steve [Margulis] said about the role of facilities management and education. It's very clear to me that the elements of the process rather than the place are primary. We don't have a facility management group at the Harvard Business School. We don't have a plant managing group. We don't have an organizational structure group. The students do not take a course on organizational structures. They talk about organizational behavior. It seems to me that if I were ever trying to sell facility management in Cambridge, it would be a version oriented toward process, the bottom line of how you are increasing the profits or profit. The environment has to be oriented toward that end goal. . . .

Now, it's interesting that facility management, of course, had a tremendous and important contribution from furniture manufacturing because furniture manufacturers think in terms of place. It's time to rethink in terms of process. That's my conclusion. I'd like to hear people disagree or agree on that.

David Armstrong:

We talked about that question at FMI when we decided to approach facility management from the place side, rather than from process or people. We found that people in charge of operating units, looking at things from the process side, treated facilities as an ad hoc problem. If we were to stay consistent with our approach, we couldn't look at facility management that way. We wanted to be more strategic and thought that a place perspective had a better chance of accomplishing that.

Martha Whitaker:

I have one question I would like to ask of all of you. When I looked at who are my personal, as well as organizational, role models, I asked what would I as a facility manager go to jail for? You ask what does a professor at a university go to jail for. It's for academic freedom. What does a reporter or member of the press go to jail for? It's for freedom of speech and protecting a source. . . . I think what makes a great role model or great organization is knowing what the edge is. . . .

Perry Johnson:

I don't know if I would go to jail for it, but I would quit my job if management insisted on putting together a sloppy facility. If they totally eliminated the rights of the people and the need for trying to incorporate and integrate people in the facilities process. . . .

Dominick Prezzano:

. . . My job really is to protect the people from the weather, from the elements, and give them the best working condi-

Jane Stoker

tions I know how to. . . . I believe that a company is only as good as its people are. It will never be better. . . .

Tina Walden:

I think I heard my answer here today. The thing I would go to jail for would be for remaining out of step, the right and the enjoyment of becoming visionary enough to support a far reaching solution and be a part of that.

Philip Stone:

There are a number of people here who share a rural, midwest background with me. I thought about how, in today's agribusiness, . . . things are raised in cages, never get any exercise, and live in little cubicles. Cattle are kept in stations all their lives, so they don't waste a calorie in the wrong place. And it appalls me, the sort of Taylorization of agribusiness. It would appall me if the Taylorization of the workplace ever got to this point where the intrinsic worth of work and the exploitation of people got to this level.

. . . I think there are very strong dangers in what's going on in our environment, and we should constantly monitor and watch for the point where people look only at the exploitation of the work experience.

David Armstrong:

I would go to jail if an organization ignored chemistry, the smiles per day.

Martha Whitaker:

. . . I think as a facility manager I would go to jail for the lack of integration between people and the organization and the work of the organization. . . . You can't buy a jar

of it. You can't take a pill for it. If you don't decide what it is that we'd all go to jail for and what integration means at a particular site in a particular department, then I think as a profession we won't ever have role models and people will always be searching for them.

Mr. O'Toole's Closing Remarks

Well, everything that I heard you say yesterday and today convinces me, indeed, that the role of the facilities manager should be that of an integrator, much like an artist who brings harmony to a canvas. Everything that you've said convinces me that there is indeed a real relationship between the parts and the whole—the facility management style, strategy, culture, productivity, customer relations, corporate image—dozens of other things that I could mention from the last couple of days. . . .

Each time you talked about raising your vision or about being professional, we were really talking about the integrated nature of facilities management. It is so important that I want to reinforce that message with you. . . .

Finally, as I listened to you talk about excellence in facility management, it became very clear to me that excellence in facility management was excellence in management, that integration is really what management is all about. When you're talking about a great facility manager, you've described a great manager. There are a precious few of them because, as John [Adams] mentioned, you're talking about an ideal. Great management is an ideal. Who could ever achieve it? You know what's bad, you can be better, and you can constantly be improving. What I learned from you today is that a great facilities manager is simply a good manager. And perhaps we're going to have to live with that.